AACM

Tameka Lewis/R6/USEPA/US
08/11/2008 10:59 AM

To Lawrence Starfield/R6/USEPA/US@EPA
cc Adele Cardenas/R6/USEPA/US@EPA, Carl Edlund/R6/USEPA/US@EPA, Steve Vargo/R6/USEPA/US@EPA
bcc
Subject Re: Fw: Status of Peer Review & FR

History: This message has been replied to.

Ronald Dodson-Demo 1
Herbert Duane-New
William Ewing and David Goldsmith ~~Demo 1 and~~ QAPP
Andrew Oberta-New

Busy 12:30 - 2:30 E
3-4 E

Thanks!
****
Tameka D. Lewis
U.S. EPA-Region 6
Multimedia Planning and Permitting Division
1445 Ross Avenue, Suite 1200
Dallas, TX 75202
tel: 214.665.8578
fax: 214.665.6762
email: lewis.tameka@epa.gov

1:30 - 3
3 pm Carl

Lawrence Starfield/R6/USEPA/US

Caucus w pti individuals ?!
Matt's already discussed

Lawrence Starfield/R6/USEPA/US
08/11/2008 10:54 AM

To Tameka Lewis/R6/USEPA/US@EPA
cc Adele Cardenas/R6/USEPA/US@EPA, Carl Edlund/R6/USEPA/US@EPA, Steve Vargo/R6/USEPA/US@EPA
Subject Re: Fw: Status of Peer Review & FR

Mayor think he's fine,

Known about individuals
Have met's

Of these peer reviewers --

Who was also on the peer review for the QAPP?

Who was also on the peer review for Demo #1?

Larry

Tameka Lewis/R6/USEPA/US

Tameka Lewis/R6/USEPA/US
08/11/2008 10:47 AM

To Carl Edlund/R6/USEPA/US@EPA, Lawrence Starfield/R6/USEPA/US@EPA
cc Steve Vargo/R6/USEPA/US@EPA, Adele Cardenas/R6/USEPA/US@EPA
Subject Fw: Status of Peer Review & FR

Fw: ACTIVISTS EYE NOVEL SUIT TO DETER 'WET' ASBESTOS DEMOLITION METHOD

Adele Cardenas to: David Ferguson, steve vargo, Dr. Carl Edlund, Ben Harrison, Suzanne Murray, Lawrence Starfield, Myron Knudson, Sally Gutierrez, David Gray 03/12/2009 07:31 AM

FYI- Adele
Nancy Jones

----- Original Message -----
From: Nancy Jones
Sent: 03/11/2009 10:53 PM EDT
To: Adele Cardenas; David Eppler
Subject: Fw: ACTIVISTS EYE NOVEL SUIT TO DETER 'WET' ASBESTOS DEMOLITION METHOD

FYI

Sent by EPA Wireless E-Mail Services
Phyllis Flaherty

----- Original Message -----
From: Phyllis Flaherty
Sent: 03/11/2009 07:56 PM EDT
To: Rick Duffy; Nancy Jones
Subject: Fw: ACTIVISTS EYE NOVEL SUIT TO DETER 'WET' ASBESTOS DEMOLITION METHOD

----- Forwarded by Phyllis Flaherty/DC/USEPA/US on 03/11/2009 07:55 PM -----

Fw: ACTIVISTS EYE NOVEL SUIT TO DETER 'WET' ASBESTOS DEMOLITION METHOD

Everett Bishop to: Phyllis Flaherty, Dan Klaus 03/11/2009 10:29 AM

Additional action being taken on the St. Louis Airpost lawsuit.

Everett Bishop
Office of Compliance
US EPA
phone: 202.564.7032
fax: 202.564.0050
email: bishop.everett@epa.gov
----- Forwarded by Everett Bishop/DC/USEPA/US on 03/11/2009 10:28 AM -----

From:	Jeffrey Bratko/R5/USEPA/US
To:	Everett Bishop/DC/USEPA/US@EPA, Phillip King/R5/USEPA/US@EPA
Date:	03/11/2009 07:58 AM
Subject:	ACTIVISTS EYE NOVEL SUIT TO DETER 'WET' ASBESTOS DEMOLITION METHOD

From Inside EPA

ACTIVISTS EYE NOVEL SUIT TO DETER 'WET' ASBESTOS

DEMOLITION METHOD

Activists are looking to a novel suit pending in federal court challenging St. Louis' use of a controversial method for demolishing asbestos-containing buildings in the hopes that a ruling in their favor will deter future use of the method and dissuade EPA from reviving Bush administration efforts to endorse it.

The Washington-based activist law firm Public Justice is among a number of law firms representing plaintiffs in the case *Families For Asbestos Compliance, Testing And Safety v. City of St. Louis, Missouri et al.* , in which the plaintiffs are seeking civil penalties and injunctive relief regarding the city's use of the so-called "wet-method" in demolishing asbestos-containing buildings as part of an airport renovation project.

"I'm trying to kill it," an attorney involved with the suit on behalf of the plaintiffs says of the wet method, which involves soaking asbestos-containing buildings in the hopes doing so will limit asbestos dispersal in the air during demolition, rather than removing the asbestos from the buildings before hand.

"I hope this case kills it, and if not, I hope the Obama administration kills it," the source says. The Obama EPA to date has said nothing on the wet method, but the Bush EPA took steps toward a rule that would have allowed use of it as an alternative to demolition procedures the agency's national emission standards for hazardous air pollutants (NESHAP) currently allow. The NESHAP currently requires workers to remove and dispose of asbestos prior to demolition.

The Bush EPA, however, dropped its efforts to endorse the wet method amid criticism that it was using a flawed risk assessment to back its scientific research. Critics, including state air regulators, public health activists and others also alleged the wet method may not be cost-effective.

In a ruling late last year, U.S. District Court Judge Carol Jackson, of the Eastern District of Missouri, ruled the city violated EPA's NESHAP -- which critics of the wet method say is significantly more protective of public health than the alternative demolition option -- by not removing in advance asbestos containing materials from 99 structures it demolished. Plaintiffs during a trial late last month urged the judge to punish the city for the violations, and are now poised to file additional, post-trial briefs detailing their arguments.

The judge's order finding the city liable for NESHAP violations for using the wet method represents a first-time ruling, the attorney involved with the case says, adding that activists hope an order for civil penalties and injunctive relief will further deter proponents of the controversial method.

In its ruling late last year, the court found that the "evidence does not show whether the EPA was aware of the content of [local regulations] for wet demolition . . . but the EPA ultimately determined . . . that the [local regulations] were not consistent with NESHAP. . . . To the

extent that the [local regulation] was less stringent than the NESHAP, it was thus invalid, and the city's reliance on that [regulation], even if taken in good faith, does not absolve it of liability for alleged NESHAP violations," the court ruled.

Plaintiffs are now asking the judge to order the city to take remedial actions to evaluate and address the environmental consequences of the demolition and to issue a civil penalty of up to of $2.7 million. Activists hope that a successful suit -- coupled with the recent change in administration -- will quash any efforts by EPA or others to push for use of the wet method, the attorney says.

However, in the St. Louis case, city officials are arguing they "acted in good faith to comply with the NESHAPs" and "that the EPA approved methods at all times," according to a Jan. 28 pre-trial brief. "When the EPA asked the City to cease demolitions so that the EPA could conduct further review into whether the approved methods were appropriate, the City immediately stopped its demolitions," the city argues. "In these circumstances, no penalty should be assessed against the City."

In their pre-trial brief, plaintiffs acknowledge that in its ruling finding the city liable for NESHAP violations, "the Court stated that 'it appears that the city's efforts to obtain the necessary permits and supervision were in good faith. However, "this is not the kind of good faith that warrants a reduction in penalties," the plaintiffs argue.

"[T]he City's primary motive in obtaining those permits and supervision was not to ensure compliance, but to save time and money by using a wet demolition technique that cuts corners to evade compliance," the plaintiffs argue. *Relevant documents are available on InsideEPA.com. See page 2 for details.*

POLICYALERT-26-5-2

2/18/09
ABCM

Met w/ enviros? (July '08 last time)
NEJAC?

Benefit
Remove soil
Protect workers
Faster / may cost less
Less steps where make mistakes
Pre-demo loadings on pavement (decay of/deterioration/liability)

Ed Admin OK
topics J
Stakeholder
Arrow
Mean vis, others

Ben Harrison/R6/USEPA/US
01/15/2009 10:05 AM

To "Lawrence Starfield" <Starfield.Lawrence@epamail.epa.gov>
cc
bcc
Subject Fw: OGC comments on peer review response to comments

Ben J. Harrison
Deputy Regional Counsel
Region 6, U.S. EPA
Ben Harrison

----- Original Message -----
From: Ben Harrison
Sent: 01/14/2009 05:13 PM CST
To: Mike Fisher; John Gregory
Cc: murray.suzanne@epa.gov
Subject: OGC comments on peer review response to comments

Attached are OGC (Chris Kaczmarek) comments on the Response to Peer review comments. Also, I wanted to flag some specific sections in the AACM2 draft final report that are specifically related to the lab. Sections 7.2 and 7.3 from pages 75 through 88. Also, section 9.1, pp 112-115. There is some discussion of fiber size in section 8.2.2, but some of that may have been revised already. I'll try to send you more specifics regarding AACM3 and the Response to comments in the morning. Thank you both.

Ben J. Harrison
Deputy Regional Counsel
US EPA, Region 6
(214) 665-2139

----- Forwarded by Ben Harrison/R6/USEPA/US on 01/14/2009 05:08 PM -----

AACM_EPA Response to Peer Review Comments on AACM2 and AACM3 1.13.2009_cekedits.doc

Roger Wilmoth/CI/USEPA/US

01/15/2009 04:47 PM

To Adele Cardenas/R6/USEPA/US@EPA, Carl Edlund/R6/USEPA/US@EPA, Steve Vargo/R6/USEPA/US@EPA, Lawrence

cc Ron Rutherford/R8/USEPA/US@EPA, Keith Barnett/RTP/USEPA/US@EPA, Chris Kaczmarek/DC/USEPA/US@EPA

bcc

Subject AACM2, AACM3, and Response to comments reports

All,

Done (I think, depending on criminal) and sent to Adele. What a marathon! Thanks for the support!!!!!!!! Maybe I won't have to work all weekend.

Adele, I talked to Erik Winchester and he said it was fine to only post the response to comments that were integrated with the Peer Review Report. We don't need to post both the original report and the response report since the response report contains the verbatim original.

Rog

Roger C. Wilmoth, Senior Research Engineer
US Environmental Protection Agency
National Risk Management Research Laboratory
Cincinnati, Ohio 45268
Send mail to:
5786 Observation Ct
Milford, OH 45150
Phone:
Cell: 513-226-4488
Fax: 513-248-0711
Email wilmoth.roger@epa.gov

AACM
/OECA

Lawrence Starfield/R6/USEPA/US
01/14/2009 01:57 PM

To Adele Cardenas/R6/USEPA/US@EPA, Ben Harrison/R6/USEPA/US@EPA, Suzanne Murray/R6/USEPA/US@EPA, "Carl Edlund"
cc
bcc
Subject Re: Final Response Document with Comments incorporated

Will one of you try to get this resolved with OECA?

Sent by EPA Wireless E-Mail Services
Adele Cardenas

----- Original Message -----
From: Adele Cardenas
Sent: 01/14/2009 01:04 PM EST
To: Ben Harrison; Suzanne Murray; Lawrence Starfield; "Dr. Carl Edlund" <edlund.carl@epa.gov>; "steve vargo" <vargo.steve@epa.gov>
Cc: "roger wilmoth" <wilmoth.roger@epa.gov>; Kevin Teichman
Subject: Fw: Final Response Document with Comments incorporated

FYI- Adele
Keith Barnett

----- Original Message -----
From: Keith Barnett
Sent: 01/14/2009 01:01 PM EST
To: Wilmoth.Roger@epamail.epa.gov@EPA; Adele Cardenas; Patricia Erickson
Subject: Fw: Final Response Document with Comments incorporated

Peter Tsirigotis asked me to forward this email to you.

Keith W. Barnett
USEPA/OAQPS/SPPD/MMG
Mail Code D243-02
Research Triangle Park, NC 27711
919-541-5605
barnett.keith@epa.gov
----- Forwarded by Keith Barnett/RTP/USEPA/US on 01/14/2009 01:00 PM -----

Chris Kaczmarek/DC/USEPA/US
01/14/2009 11:14 AM

To Keith Barnett/RTP/USEPA/US@EPA
cc
Subject Fw: FInal Response Document with Comments incorporated

Confidential
Attorney-Client Communication
Attorney Work Product
Pre-Decisional/Deliberative -- Do Not Release Under FOIA

FYI

----- Forwarded by Chris Kaczmarek/DC/USEPA/US on 01/14/2009 11:14 AM -----

John Gregory/DC/USEPA/US

To Mike Fisher/DC/USEPA/US@EPA

01/14/2009 11:09 AM

cc Chris Weis/NEIC/USEPA/US@EPA, Eric Nelson/NEIC/USEPA/US@EPA, Chris Kaczmarek/DC/USEPA/US@EPA, Ron Rutherford/R8/USEPA/US@EPA

Subject Fw: FInal Response Document with Comments incorporated

Confidential
Attorney-Client Communication
Attorney Work Product
Pre-Decisional/Deliberative -- Do Not Release Under FOIA

Mike,

NEIC's Chris Weis called saying he needs more time to adequately review the attached document which includes comments that EMSL (one of the government's experts in the Grace criminal case) is, in effect, unreliable. Chris is preparing for a Daubert hearing in Montana and thinks he could get to it this weekend. Although the draft may already be Brady material, OECA/OCEFT has historically commented on science aspects of the AACM and its predecessors; before the document becomes an official EPA document on Region 6's website (currently on track to occur this week despite adequate time for review) I think OECA's asbestos expert at NEIC should have a reasonable opportunity to review what may become an important official EPA document comparing the AACM and the asbestos NESHAP. I recommend that OECA/OCEFT seek additional time for our science experts to review this document before it is published on Region 6's website. What do you think?

John S. Gregory
Senior Counsel for Homeland Security
U.S. EPA
Office of Criminal Enforcement, Forensics & Training
Legal Counsel Division
1200 Pennsylvania Ave., Mail Code 2232A
Washington, D.C. 20004
office: 202.564.2536
cell: 202.369.5721
fax: 202.501.0162
email: gregory.john@epa.gov

----- Forwarded by John Gregory/DC/USEPA/US on 01/14/2009 10:35 AM -----

From:	John Gregory/DC/USEPA/US
To:	Chris Weis/NEIC/USEPA/US@EPA
Cc:	Mike Fisher/DC/USEPA/US@EPA, Eric Nelson/NEIC/USEPA/US@EPA
Date:	01/14/2009 10:13 AM
Subject:	Fw: FInal Response Document with Comments incorporated

Chris,

It appears that our colleagues in Region 6 are trying to close the time for review and comment on EPA's responses to the AACM peer reviewers comments. I don't know if this is important enough for the criminal program to request more time. What do you think?

John S. Gregory
Senior Counsel for Homeland Security
U.S. EPA
Office of Criminal Enforcement, Forensics & Training
Legal Counsel Division
1200 Pennsylvania Ave., Mail Code 2232A
Washington, D.C. 20004
office: 202.564.2536
cell: 202.369.5721
fax: 202.501.0162
email: gregory.john@epa.gov

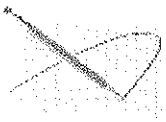
Report potential environmental violations at: http://www.epa.gov/tips

----- Forwarded by John Gregory/DC/USEPA/US on 01/14/2009 09:59 AM -----

From:	Ron Rutherford/R8/USEPA/US
To:	John Gregory/DC/USEPA/US@EPA
Date:	01/14/2009 09:20 AM
Subject:	Fw: FInal Response Document with Comments incorporated

John, do you all have anything to report on your review? Thanks.

----- Forwarded by Ron Rutherford/R8/USEPA/US on 01/14/2009 07:19 AM -----



Adele Cardenas/R6/USEPA/US
01/14/2009 05:23 AM

To Roger Wilmoth/CI/USEPA/US@EPA

cc Andrew Gillespie/CI/USEPA/US@EPA, Ben Harrison/R6/USEPA/US@EPA, Carl Edlund/R6/USEPA/US@EPA, Chris Kaczmarek/DC/USEPA/US@EPA, David Ferguson/CI/USEPA/US@EPA, Keith Barnett/RTP/USEPA/US@EPA, Kevin Teichman/DC/USEPA/US@EPA, Lauren Drees/CI/USEPA/US@EPA, Lawrence Starfield/R6/USEPA/US@EPA, Patricia Erickson/CI/USEPA/US@EPA, Penny Lassiter/RTP/USEPA/US@EPA, Richard Greene/R6/USEPA/US@EPA, Sally Gutierrez/CI/USEPA/US@EPA, Steve Vargo/R6/USEPA/US@EPA, Williamm Barrett/CI/USEPA/US@EPA, Roger Wilmoth/CI/USEPA/US@EPA

Subject Re: FInal Response Document with Comments incorporated

Roger,
Thank you for completing and getting this out. Folks have until 1PM(ET) to submit comments to both of us ion the document attached and then we will close the chapter on this document along with the two

separate research reports. If anyone has any questions or issues please contact us immediately. We appreciate your assistance in keeping this process moving.

Thanks,
Adele Cardenas Malott, P.E.
-----Roger Wilmoth/CI/USEPA/US wrote: -----

To: Adele Cardenas/R6/USEPA/US@EPA, Andrew Gillespie/CI/USEPA/US@EPA, Ben Harrison/R6/USEPA/US@EPA, Carl Edlund/R6/USEPA/US@EPA, Chris Kaczmarek/DC/USEPA/US@EPA, David Ferguson/CI/USEPA/US@EPA, Keith Barnett/RTP/USEPA/US@EPA, Kevin Teichman/DC/USEPA/US@EPA, Lauren Drees/CI/USEPA/US@EPA, Lawrence Starfield/R6/USEPA/US@EPA, Patricia Erickson/CI/USEPA/US@EPA, Penny Lassiter/RTP/USEPA/US@EPA, Richard Greene/R6/USEPA/US@EPA, Sally Gutierrez/CI/USEPA/US@EPA, Steve Vargo/R6/USEPA/US@EPA, Williamm Barrett/CI/USEPA/US@EPA
From: Roger Wilmoth/CI/USEPA/US
Date: 01/13/2009 10:50PM
cc: Roger Wilmoth/CI/USEPA/US@EPA
Subject: Response Document

It is almost midnight and here it is. What next?

Rog

Roger C. Wilmoth, Senior Research Engineer
US Environmental Protection Agency
National Risk Management Research Laboratory
Cincinnati, Ohio 45268
Send mail to:
5786 Observation Ct
Milford, OH 45150
Phone:
Cell: 513-226-4488
Fax: 513-248-0711
Email wilmoth.roger@epa.gov

[attachment "EPA Response to Peer Review Comments on AACM2 and AACM3 1.13.2009.doc" deleted by Lawrence Starfield/R6/USEPA/US]

AACM

Adele
Cardenas/R6/USEPA/US
01/14/2009 03:24 PM

To Kaczmarek.chris@epa.gov, barnett.keith@epa.gov, rutherford.ron@epa.gov
cc lassiter.penny@epa.gov, mazakas.pam@epa.gov, fruh.steve@epa.gov
bcc Lawrence Starfield/R6/USEPA/US
Subject Status and Next Steps.....AACM Research Documents Follow-up Activities

Dear AACM HQ's Contacts:

This is the latest and greatest on next steps:

Phase 1 - Completion of the AACM2 and AACM 3 Technical reports and EPA's Reponse to Peer Review Comments

Final EPA Response to Peer Review Comments Report - **Final**
Technical Support Documents - AACM2 and AACM 3 Reports now being updated with submitted Comments, to be released upon receipt from ORD for Quick Review

Follow-up Conference Call with Senior Management on noted items not included in Final Technical Reports- Decision Call.

Conclusion of Call - Finalize Technical Support Documents and load all Research Documents on Website by COB Friday, January 15, 2009.

Phase 2 - Discussion of the Comparison Document - Targetted for Letter Peer Review - January 26, 2009

Check in Call for Next Steps on Comparison Report on all AACM Research Completed with any exisiting Agency Science on Asbestos NESHAP activities.

Propose a call at 3:00PM(CT) for 30 minutes to an hour.

Call in number is 1-866-299-3188/214-665-7210#.

If this time does not work for folks, please feel free to contact me directly.

Appreciate your assistance in completing these tasks and please besure to contact me directly if you have any additional concerns or issues not yet raised.

Thanks,
Adele Cardenas Malott, P.E.
(214) 665-7210 - Office
(214) 437-9811 - Business Cell

--

Dear AACM HQ's Contacts:

Please keep in mind we have two parts in motion:

Phase 1 - Completion of the AACM2 and AACM 3 Technical reports and EPA's Reponse to Peer Review Comments

We are nearing the final steps in completing the Research project documents and you will receive later tonight or early tomorrow the final EPA Response to Peer Review Comments Report with all of the incorporated comments received. A quick look at the final EPA Response to Peer Review Comments document for you to review prior to posting, Wednesday, January 14, 2009 COB. **Comments are due to Roger and myself by 1PM(ET).**

Roger is reviewing and we will discuss the comments received on the Final Technical Reports AACM 2 and AACM3. You will be notified if any changes are not incorporated into the Final Technical Reports prior to posting on the Website. Please keep in mind that the Technical documents have been on the website since July 21, 2008 and noticed through public comment.

Phase 2 - Discussion of the Comparison Document - Targetted for Letter Peer Review - January 26, 2009

A conference call was targetted for Wednesday, January 14 and we will move that call to Thursday, January 15, 2009 in the AM if possible. Issues and comments on the comparison Document are due by COB on Tuesday, January 20, 2009.

The conference call is to discuss the purpose of the final document in completing the Research Phase of the AACM and next steps.

Please let me know if Thursday is not going to work for folks to have this discussion.

Lawrence Starfield/R6/USEPA/US
12/23/2008 03:43 PM

To Pat Gaspar/R6/USEPA/US
cc
bcc
Subject Fw: Conference Call on AACM Report Progress

Pls print
Sent by EPA Wireless E-Mail Services
Carl Edlund

----- Original Message -----
From: Carl Edlund
Sent: 12/22/2008 02:37 PM CST
To: Lawrence Starfield; Ben Harrison; vargo.steve@epa.gov; Adele Cardenas
Cc: Roger Wilmoth
Subject: Conference Call on AACM Report Progress

I participated in a conference call with Roger, Kevin Tichman, Patricia Erickson, and Sally Guitierrez to review the next steps in AACM research publication. Roger gave an update on the various reviews:

- The draft response to Peer Review comments is out for internal agency review. The goal is to have the 3 reports and peer responses posted for general public by January 15. Richard has a speaking engagement with the conference of mayors and it would be great to have visible results to point to.
- The comparison report [AACM 1,2,3 plus other previously published data] will go through letter peer review beginning the end of January [after the peer review material has been posted]. Kevin confirmed that letter peer review process was appropriate for this but wanted to have input from OGC/ORC, and OAQPS before that.

I agreed to have notice of the AACM results discussed on the Air Director call and said I'd see if Larry could get it added to the DRA call as well.

AACM - Peer Review

Date: Wednesday, September 10, 2008 1:42 PM

From: Starfield.Lawrence@epamail.epa.gov

To: LarryHOme <astarfield@tx.rr.com>

Subject: Fw: Draft Pre-Meeting Reviewer Comments

Sent by EPA Wireless E-Mail Services

----- Original Message -----
From: Adele Cardenas
Sent: 09/10/2008 11:54 AM EDT
To: Lawrence Starfield; "steve vargo" <vargo.steve@epa.gov>; "Dr. Carl Edlund" <edlund.carl@epa.gov>
Cc: Richard1 Greene
Subject: Fw: Draft Pre-Meeting Reviewer Comments

FYI-Adele
----- Forwarded by Erik Winchester/DC/USEPA/US on 09/09/2008 05:35 PM -----

"Kathy Coon" <SAUNDKAT@Versar.com> 09/09/2008 05:16 PM

To: Erik Winchester/DC/USEPA/US@EPA
cc:
Subject: Draft Pre-Meeting Reviewer Comments

Hi Erik

Attached is a draft of the pre-meeting reviewer comments. David Goldsmith will be sending us his comments tonight. David is then planning on sending out an updated version.

Have a safe trip!

Kathy

>>>>>>>>>>>><<<<<<<<<<<<
Kathy Coon
Versar, Inc.
6850 Versar Center
Springfield, Virginia 22151
703-750-3000 ext. 545
703-642-6954 (fax)
>>>>>>>>>>>>><<<<<<<<<<<<

Adele Cardenas/R6/USEPA/US

09/19/2008 08:34 AM

To Ben Harrison/R6/USEPA/US@EPA, John Blevins, knudson.myron@epa.gov, edlund.carl@epa.gov, vargo.steve@epa.gov

cc Lawrence Starfield/R6/USEPA/US@EPA, Greene.Richard@epamail.epa.gov, Sam Coleman/R6/USEPA/US@EPA

bcc

Subject Fw: correspondence re: asbestos NESHAP and the NAAs - Dana Brown

Ben,

Just a note that it looks like OECA would prefer we respond directly to Dana Brown but is willing to do something jointly. I would like to get thoughts on how we should proceed? Appreciate your assistance. I have a briefing with Carl this morning and will discuss it with him today.

Thanks,
Adele Cardenas Malott, P.E.

----- Forwarded by Adele Cardenas/R6/USEPA/US on 09/19/2008 08:29 AM -----

Roger Wilmoth/CI/USEPA/US

09/19/2008 07:20 AM

To Bob Olexsey/CI/USEPA/US@EPA, Fran Kremer/CI/USEPA/US@EPA, Patricia Erickson/CI/USEPA/US@EPA, Adele Cardenas/R6/USEPA/US@EPA

cc

Subject Fw: correspondence re: asbestos NESHAP and the NAAs

More from our friend Dana

Rog

Roger C. Wilmoth, Senior Research Engineer
US Environmental Protection Agency
National Risk Management Research Laboratory
Cincinnati, Ohio 45268
Send mail to:
5786 Observation Ct
Milford, OH 45150
Phone:
Cell: 513-226-4488
Fax: 513-248-0711
Email wilmoth.roger@epa.gov

----- Forwarded by Roger Wilmoth/CI/USEPA/US on 09/19/2008 08:20 AM -----

Phyllis Flaherty/DC/USEPA/US

09/18/2008 08:03 PM

To Roger Wilmoth/CI/USEPA/US@EPA

cc

Subject Fw: correspondence re: asbestos NESHAP and the NAAs

Mr. Brown kept me in the loop about the Court Case.

----- Forwarded by Phyllis Flaherty/DC/USEPA/US on 09/18/2008 08:03 PM -----

Phyllis
Flaherty/DC/USEPA/US
09/18/2008 07:54 PM

To Pam Mazakas
cc Randy Hill/DC/USEPA/US@EPA, Gigliello.Kenneth@epa.gov
Subject Fw: correspondence re: asbestos NESHAP and the NAAs

The incoming from Dana Brown focuses on the NAA's. It seems more appropriate for your office to respond or that we jointly respond. My response to his previous concerns on documents posted by states on their websites is attached below. This is the same individual that Region 6, Region 7, OGC, OAQPS have corresponded with extensively on asbestos related issues, including Fort Chaffee..

Phyllis Flaherty, Acting Associate Director
Compliance Assessment & Media Programs Division/OC
202-564-4131
----- Forwarded by Phyllis Flaherty/DC/USEPA/US on 09/18/2008 07:41 PM -----

<dbrown@gebco.org>
09/17/2008 02:59 PM

To Phyllis Flaherty/DC/USEPA/US@EPA, Everett Bishop/DC/USEPA/US@EPA
cc '"Jim Hecker"' <JHECKER@publicjustice.net>
Subject RE: Reply to correspondence re: asbestos NESHAP

Phyllis and Everett,

This is exactly what I am talking about in my "accusations". The Court found in favor of the opinion that I have been trying to get to the bottom of for 4 years. As you can see in the court record there is plenty of "evidence" to show that EPA personnel did exhibit gross misconduct in the execution of their duties. This is exemplary with what we are dealing with in Region 6, and clearly shows that the EPA Region 7 was out of control. There is a clear and ongoing pattern of ignoring or minimizing the importance of enforcement in these regions. The "substandard structures" with "wet demolition methods" demolitions went on wholesale in Greensburg, Kansas, Coffeyville, Kansas, and Chapman and Ellis, Kansas, with the EPA Region 7's blessing and under their oversight. In Region 6, we have the Hurricane strike areas and in the Katrina Strike areas, they are still using the "wet demo" methods wholesale 3 years later when there is no emergency anymore. These issues need to be addressed. EPA already has a policy in the 1992 guidance document concerning the "catastrophic events" and the application of NESAHP. I have seen no other documentation to supersede it, and nothing is coming out of HQ, but the EPA Region 6 is running wild with it. There are issues of emergency and economic impact, but that must be weighed with the laws, and the long term health effects. All of these are ignored for cost savings in the EPA Regions 6 and 7. That is their pattern.

It is clear in the Court's opinion that Cities, State, and Regions do not have authority to ignore or to re-interpret the Asbestos NESHAP as they see

fit, it must be consistent with as the court stated with the preamble and the clarifications. The Court's finding was the AOC was not valid, nor was the allowance of the wet demolition method valid by HQ. It is time for EPA to seize the moment, and get back on board of the regulation of asbestos consistent with the laws.

Concerning this court finding I am making a formal request of your office to define the official national asbestos policy for all regions, and clarify exactly what the Asbestos NESHAP requires and the "marching orders" given to the rest of the Regions to stop the "creative interpretations" of this regulation. The "case by case" and the "alternative controls" and all other "circumventions" by Cities and States and their programs through the Regional offices have fostered a massively inconsistent and "non-uniform" application of the asbestos NESHAP. I think the complaints I have referred to your office in Kansas, the AACM, and in Texas show a clear pattern. I also have some letters form Adele Cardenas-Malott and David Eppler showing this same patterns, that the NESHAP is "up to the state delegated program" of the NESHAP. The court stated "NO" in no uncertain terms, that their delegated responsibility is to respond to the NESHAP minimums and at least be as stringent, but cannot be less stringent.

Headquarters, OECA, and OAR need to come up with a consistent process for re-establishing the asbestos NESHAP that is consistent with the CAA requirements, and the NESHAP regulation, and have all EPA Regional Offices comply equally with the intent and letter of the Laws of CAA and the NESHAP. We all need to be "singing from the same songbook" with asbestos equally regulated in all regions. This simply is not happening. There will be no more of EPA 'sitting on it's hands" on this matter if I have anything to say about it. It only would take a small request to the EPA OIG and there is a clear Public Health issue here, and EPA currently is on the wrong side.

The Court made this matter pretty clear that EPA had no authority to re-interpret the NESHAP this way to ignore the removal of RACM prior to demolitions and the subsequent "research" conducted by EPA with the AACM, the "test and Burn Program" and the NAA letters that Granta Nakayama passes out like candy for every catastrophic event. Asbestos is a health hazard and is not to be ignored based on "demolition costs".

I additionally want all activities stopped on the inclusion of the AACM into the NESHAP stopped, pending an internal investigation into the agencies misadventures with their creative applications and interpretations of the Asbestos NESAHP, and on those that were involved with this activity investigated for possible termination of employment for gross misconduct. There have been multiple cases of "misrepresenting" and outright lying on behalf of the EPA Regions 6 and 7 concerning the Asbestos regulation and the Asbestos NESAHP, and it is now in the Federal Court record. Ignoring the obvious is not in the best interests with the public health mandates, nor is it consistent to the EPA's charge of responsibility to those public health issues.

Dana Brown
GEBCO Associates

-----Original Message-----
From: Flaherty.Phyllis@epamail.epa.gov
[mailto:Flaherty.Phyllis@epamail.epa.gov]
Sent: Thursday, September 11, 2008 5:34 PM
To: dbrown@gebco.org
Cc: Bishop.Everett@epamail.epa.gov
Subject: Reply to correspondence re: asbestos NESHAP

This responds to your August 26 e-mail to Everett Bishop and me in which you object to our referring your incoming to Region 6 for response. Your original e-mail raised concerns about a guidance document from Texas that defined "site" under the Texas regulations. Your specific concern is that the federal asbestos NESHAP does not give a specific definition of a site. Region 6 communicated this to Texas. You also raised a concern that a Kansas website included a June 13, 2008 document which implied that asbestos containing materials were not in use after 1980. I referred this to Region 7 to address with the State. Kansas corrected the archived document via an addendum.

When questions arise with specific statements in state documents, it is more appropriate for the region to address concerns with the state directly. This is also true for concerns with state compliance/enforcement programs for authorized states. It is the region's responsibility to work directly with the states.

Your August 26 e-mail contained a number of accusations concerning the Region 6 compliance and enforcement program for the asbestos NESHAP. You indicate that there are major problems but did not include specific facts other than the two issues discussed above. Both regions have responded appropriately to these. Having worked closely with Region 6 during its response to Hurricanes Katrina and Rita, my experience is that they take the asbestos NESHAP requirements quite seriously.

Please note that I also received your August 29 e-mail to Jamie Green, which was complimentary and appreciative of the Region 7 response on the concern with regard to the Kansas document. I'm glad that the referral to Region 7 addressed your concerns satisfactorily.

Sincerely,

Phyllis Flaherty, Acting Associate Director
Compliance Assessment & Media Programs Division/OC

<dbrown@gebco.org
g>

08/26/2008 01:52 PM

To
Everett Bishop/DC/USEPA/US@EPA, Phyllis Flaherty/DC/USEPA/US@EPA

cc
"'Linda Reinstein'" <lreinstein@yahoo.com>, Aubrey Miller/EPR/R8/USEPA/US@EPA

Subject
FW: Texas NESHAP interpretation on PSQA-ASB001

TO: Everett Bishop and Phyllis Flaherty

Thank you for partially addressing the Asbestos NESHAP interpretation of the Texas DSHS, I had sent to Susan Fairchild. The reason I had sent it to the HQ, is that the EPA Region 6 is not in very good compliance with the Asbestos NESHAP, and considers it a low priority. Most of the AACM folks are the "Region 6" people, and many of them do not understand the basics of the Asbestos NESHAP, and are outright misinforming the public on asbestos issues, and what the Asbestos is and is not.

I sent this to EPA HQ to see if anyone was engaged with respect to the Asbestos NESHAP, and the enforcement responsibilities of the Agency, distinct regions, and the States. With your response you simply "kicked the can down the road", and if I wanted to get the EPA Region 6 response, I would have sent it there in the first place.

I sent this to HQ because the EPA Regions 6 is behind the eight ball and the rest of the country with respect to the asbestos issue, and not protecting the public to the same standard, as required in the CAA. It has been my opinion that EPA Region 6 "was not on the same page" as the rest of EPA and the Regions when it comes to asbestos and asbestos enforcement priorities. There are requirements in the CAA in Section 102 that apply specifically to "uniform application" of laws across all states and regions. That was the reason for submitting this to EPA HQ. It seems as if EPA HQ is "kicking the can down the road".

I am also collecting information for submission to the EPA OIG on just how the asbestos program is being executed, and this is not a promising response, nor what I expected either.

There is a big problem with the EPA Region 6 with respect to asbestos regulation and enforcement, EPA HQ just ignoring it is not the answer, nor is having a response from an EPA Region 6 employee that does not understand the basics of the CAA, let alone the Asbestos NESHAP is not anything that inspires confidence with respect to Public Health.

I wanted some sort of directive to come out of HQ, not this pathetic response. I know EPA Region 6 Administrator "Mayor Green" is a political a appointed hack with no environmental experience, however, when he is not

following the mandates, the EPA HQ still needs to "keep the Regions in line", because the reason we have standards is for the "individual liberties" that include clean air and water. It is not for a political appointee to rule otherwise, or for career bureaucrats to "kick the can down
the road" to ignore the Public Health implications of one region (region 6)
doing as they damn well please with respect to asbestos, and EPA HQ doing
basically nothing.

I do need a response, for your "lack of response" to a professional's request. I deserve a much deeper explanation that what was given.

Dana Brown
GEBCO Associates

-----Original Message-----
From: Evering.Elvia@epamail.epa.gov
[mailto:Evering.Elvia@epamail.epa.gov]
Sent: Tuesday, August 26, 2008 12:02 PM
To: dbrown@gebco.org
Subject: Re: Texas NESHAP interpretation on PSQA-ASB001

Mr. Brown,

Your concern was sent to Region 6, and I communicated to Texas that the Asbestos NESHAP does not defined a site in the regulations.

If you have any questions, please call me at 214-665-7575.

Elvia E. Evering
Asbestos Program Contact
Multimedia Enforcement Section
Hazardous Waste Enforcement Branch
U.S. EPA, Region 6
1445 Ross Avenue, Ste. 1200
Dallas, TX 75202

Phyllis Flaherty, Acting Associate Director

<dbrown@gebco.org>

08/26/2008 01:52 PM

To: Everett Bishop/DC/USEPA/US@EPA, Phyllis Flaherty/DC/USEPA/US@EPA

cc: "'Linda Reinstein'" <lreinstein@yahoo.com>, Aubrey Miller/EPR/R8/USEPA/US@EPA

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request. I deserve a much deeper explanation that what was given.

Dana Brown
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Sent: Tuesday, August 26, 2008 12:02 PM
To: dbrown@gebco.org
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Elvia E. Evering
Asbestos Program Contact
Multimedia Enforcement Section
Hazardous Waste Enforcement Branch
U.S. EPA, Region 6
1445 Ross Avenue, Ste. 1200
Dallas, TX 75202

Court decision.pdf

III. GENERAL IMPRESSIONS

Gail M. Conner

Comments AACM2:

AACM requires the pre-demolition removal of TSI and fireproofing but allows demolition without removal of popcorn ceilings, troweled-on surfacing, transite, wallboard joint compound, resilient flooring/mastic, glazing compounds. AACM appears to provide greater protection to the public during demolition in regard to imminently dangerous buildings including addressing potential soil contamination. This approach maybe particularly more beneficial in blighted urban areas if the procedures followed that was used in the demonstration project. However, an obvious concern is in regard to the non-imminent dangerous buildings involving public bidding process where the performance of contractors may not be optimal. Thus, the regulatory process provided by NESHAP is more likely to prevent a major contamination release going through a neighborhood or city/town because the abatement areas are controlled with the structure still intact. Thus, abatement corrective actions can be taken immediately prior to demolition of the site. The limitation of the public sector to having contractual flexibility in the selection of contractors is a concern. The other concern is that the a learning curve would be required in the industry inclusive of re-education of contractors, supervisors, project designers with the use of the potential alternative approach to asbestos remediation. The asbestos model accreditation program curriculums should be modified to be inclusive of more substantive information and instruction in the use of AACM and addition of a training curriculum for the Asbestos-NESHAP trained individual.

The stated goal is to provide significant cost savings, however the cost savings does not appear to be significant.

Section 2.13 – "Potentially Contaminated Water and Impervious Surfaces recommends prevention of runoff of water from the demolition site with the use of bermed/trenched areas extending 25 feet from the building and/or loading area" which may not be feasible for urban row house communities when the demolition structure is attached or closely adjacent to a non-demolition structure. The movement of demolition equipment may also have limitations.

Section 2.14 – "Potentially Contaminated Soil" approach is very vague and subject to a broad range of interpretation by contractors, project designers, regulators and others. What constitutes "no debris" on a project site? Will pre-demolition soil evaluation to determine pre-existing soil contamination be included in the regulatory procedure or the responsibility of the project designer? If the procedure is the responsibility of the project designer will project design become a mandatory regulatory requirement under the AACM? Will a soil sampling standard be included as a part of the AACM requirements or will visual observations be the compliance standard. Who will be liable for regulatory compliance with the "no debris" compliance standard? The "no debris" standard creates potential liabilities *(regulatory, civil),* thus a protocol is appropriate.

Section 4.3 – "Barrier Wall Simulation" was not a practical simulation of real urban row house construction site conditions because the structures were not physically attached or to the right or left of the proposed demolished structure which would provide the "worst case" scenario. It is very typical for urban blight demolition projects to include demolition of a single row house property that is structurally attached to another property that is not schedule for demolition and possibly owned by another party or have a property located to the right or left of the proposed demolition structure. Also, the amount of construction space provided for this demolition project did not appear to be similar to the construction space available for urban row house projects. This approach is realistic for a single family dwelling un-attached structure and other free standing structures three (3) stories or less.

Comments AACM3:

The public relations dynamics in Fort Worth were more practical to urban area conditions and parties that may become involved in an asbestos demolition project. However, the proximity of the demonstration project building to adjacent buildings did not appear to provide representative of row house construction conditions, which may be the most difficult construction demolition sites.

Many of the objectives appear to have been achieved as related to no visible emissions, air, water, pavement and soil levels. There was also an additional benefit of lower worker exposure as related to compliance with OSHA regulations. It also seemed that the projects were shorter in duration of typical asbestos abatement/demolition projects. However, a primary objective did not appear to be achieved which was reduced costs. Also, regulatory compliance complexities will be obvious issues since many jurisdictions have statutes, regulations and/or codes that may impact the ability of property owners (including municipalities) to utilize AACM. Various potential jurisdictional conflicts of law issues may present potential barriers to utilization of AACM.

Ronald F. Dodson

Comments AACM2:

Demolition of building which contained external transite-Fort Chaffee Redevelopment Authority near Fort Smith, Arkansas

The building was a two-story World War II vintage wood structure in danger of collapse. The asbestos containing material associated with the facility was defined as transite. The transite was in various states of degeneration. Contamination of the environment had occurred through the weathering process in that asbestos containing dust was found on adjacent pavement. It appears reasonable that a considerable amount of the asbestos in the transite materials would have been bound in matrix before and after demolition. It is recognized that chrysotile is hydrophilic and thus logically asbestos dust should be controllable during the process since the material was to be kept "adequately wet" during the process as per the design of the protocol. The issues would have been much more

complex if amphibole containing materials had existed within the facility. The development of the project included considerations of the comments from various interested parties including those specific reviews offered from a Peer Review Panel regarding the earlier research project defined as AACM1. Specific comments regarding the various portions of research project and associated report-AACM2 will be provided in the following.

Comments AACM3:

The project consists of using wetting procedures during demolition of a building described as having "popcorn ceiling" and designated as project AACM3. While the issue of inspection is addressed in 8.10.2.1 with regard to qualification of the inspector, it is not evident to this reviewer as to where the eighteen bulk samples were taken, what was found in the samples, the condition of the ACBM nor the sampling scheme used.

Herbert T. Duane, Jr.

Comments AACM2 & AACM3: General comments not submitted at this time. See below.

William M. Ewing

Comments AACM2 & AACM3:

The general impressions gained from the two reports are mixed. Both reports do a superb job of clearly detailing exactly how the research was performed and sufficient data for the reader to reach independent conclusions. Both reports suffer from the inclusion of several statements that indicate a bias on the part of the researchers in favor of the AACM technique.[1] The removal of such statements would clarify that the research is being performed in an objective manner to fairly evaluate alternative asbestos abatement procedures. It is clear in both reports that the AACM techniques are being offered as perhaps a less expensive way to demolish buildings with certain types of asbestos products. The research projects do not seem to have given sufficient effort to the cost estimates. To estimate the NESHAP removal cost in the AACM2 project, three reputable asbestos abatement contractors should have been invited to submit firm fixed-price bids to remove the asbestos cement shingles in accordance with a specific procedure.[2] In the AACM3 project bids were obtained from some contractors that varied widely. This indicates they were not provided a clear specification of the work to be done. As a general impression, each report appears to over estimate the cost to perform the work in full compliance with the EPA asbestos NESHAP. Both reports chose to use zero for non-

[1] For example, the statement that compliance with the existing EPA asbestos NESHAP regulations contributes to the "growing crises of abandoned buildings in this country" is entirely unsupported and likely false. A similar statement in section 8.7 (Worker Protection) espouses the advantages of the AACM technique over the NESHAP method in lowering worker exposures. This is likely true but does not belong in the results section of the report.

[2] The National Institute of Building Sciences (NIBS) Model Guide Specification: Asbestos O&M Work Practices, Washington, DC (1992), Method M18, Level 2 to remove asbestos cement siding shingles.

detect values artificially producing very low exposure values for which the accuracy is unknown. This is addressed further in my comments below. For both projects a choice was made to compare the results of ASTM surface dust samples using a statistical method other than that recommended for use with that ASTM method when comparing the results from two sets of data. I was never very fond of the ASTM statistical comparison method either but the question is likely to come up as to why this was done. The quality assurance effort on both projects is to be commended. Without these efforts the problem with the air samples in the AACM2 project would not have become apparent. However, it should not take the reader until page 80 to figure out the extent of the problem.

David F. Goldsmith

Andrew F. Oberta

Preface to Comments (September 4, 2008):

In yesterday's teleconference, Dr. Goldsmith instructed the panel to concentrate on the science during our review and meeting. I have attempted to do so in preparing my comments; consequently, there is no discussion of "policy" issues other than suggestions that references to them be deleted where they occur. Important as these issues might be, they are outside the charge to this panel and should not be covered in these reports.

The charge to the panel was to evaluate the results of two research projects. It was not to compare them to each other nor to the AACM1 test. Therefore I have not addressed such comparisons in my comments. They should be considered by another peer review panel, or by the EPA Senior Management Committee that evaluates the entire AACM record for possible revision to the NESHAP.

Public participation and community impact were important aspects of AACM2 and, more so, AACM3. These matters should be carefully documented and considered as policy issues, but not in these reports. They had no discernable bearing on the conduct of the research or attainment of the objectives.

Eliminating the policy issues and comparisons from the reports will enable to authors to better focus on the research and whether the objectives were met. Conclusions can be stated more succinctly regarding attainment of the objectives in both reports.

Comments AACM2:

1. The objectives are inconsistent as to what is required to satisfy them: merely comparing the results or meeting stated criteria. There are no clear and straight-forward statements as to which objectives have been met or not met. The reader must extract the conclusions from discussions in the text that are often phrased as convoluted multiple negatives. The primary objective cannot be evaluated due to the discrepancies among the

Richard Greene/R6/USEPA/US
Sent by: Richard1 Greene

08/28/2008 10:42 AM

To George Gray/DC/USEPA/US@EPA, Kevin Teichman/DC/USEPA/US@EPA
cc starfield.lawrence@epa.gov, Roger Wilmoth/CI/USEPA/US@EPA, Adele Cardenas/R6/USEPA/US@EPA, edlund.carl@epa.gov
bcc

Subject Conduct of AACM Peer Review Panel Members

History: This message has been replied to.

Gentlemen

In studying the Peer Review Handbook, Third Edition, I note with considerable interest the repeated goal of "maintaining the credibility of the Agency and the Agency's scientific products" being of "paramount importance".

Numerous references are made to the standards of selecting peer reviewers - standards of using peer reviewers "who do not have *any* conflict of interest or an *appearance* of a lack of impartiality, and who are *completely* independent".

Since the current peer review panel includes at least one member who does not meet those standards, it is critical that the public be informed of his bias as revealed by his previous written and oral statements in opposition to the research we are conducting in the AACM project.

In fact, the Peer Review Handbook provides, in Section 3.4.6 that such public disclosure be made "at the beginning of meetings" of the peer review panel. In keeping with the goal of maintaining the credibility of this process, I urge you to instruct the appropriate person(s) conducting the work of the panel to fully comply with this instruction. It is not enough, in my opinion, that some understated reference to a vague "previous involvement" be considered sufficient to accomplish the purpose of public disclosure. It should be made clear that the "previous involvement" of the member in question resulted in his documented conclusion, before he was selected as a member of this panel, that it would be a "serious mistake" if the AACM research led to the use of the alternative method under consideration.

Further, the chair person of the panel should explain to the public that the practice of revealing this information is consistent with requirements and goals of achieving the highest ethical standards in their work and that the purpose of such disclosure is so the public can be aware of the apparent lack of impartiality by any member(s) as revealed by such statements. Only then can the public make a judgement of whether the work product of the panel has been influenced by someone who came into the process with predetermined conclusions.

Richard Greene
Regional Administrator
US EPA Region 6
1445 Ross Avenue
Dallas TX 75202-2733

214.665.2100 Voice
214.923-1961 Mobile

Gentlemen:

This morning I was told that the peer review panel has begun their work, that the one member with known un-objective and bias opinions about the AACM has begun asking for additional information and, I suspect, may have already been in contact with other peer review panel members.

AACM
Peer Review

Adele
Cardenas/R6/USEPA/US
08/22/2008 07:57 AM

To "steve vargo" <vargo.steve@epa.gov>, "Dr. Carl Edlund" <edlund.carl@epa.gov>, "Lawrence Starfield" <Starfield.Lawrence@epamail.epa.gov>, "Richard1 Greene"
cc "Tameka Lewis" <Lewis.Tameka@epamail.epa.gov>
bcc
Subject Fw: draft talking points for George and Kevin for AACM intro videos

FYI-Adele
Roger Wilmoth

----- Original Message -----
From: Roger Wilmoth
Sent: 08/22/2008 08:25 AM EDT
To: Patricia Erickson; Adele Cardenas; Erik Winchester
Cc: Lauren Drees; David Ferguson; Bob Olexsey
Subject: draft talking points for George and Kevin for AACM intro videos

Here is the first draft of the talking points for George and Kevin. Please review and provide suggestions ASAP, but not later than close of business Tuesday. Trish, please coordinate this with Sally, either now or after any revisions.

Talking points for George and Kevin for AACM Peer Review.doc

Also, I have attached a recent presentation by Mayor Greene.

Richard Greene's AACM Presentation RAs2.pdf

Rog

Roger C. Wilmoth, Senior Research Engineer
US Environmental Protection Agency
National Risk Management Research Laboratory
Cincinnati, Ohio 45268
Send mail to:
5786 Observation Ct
Milford, OH 45150
Phone:
Cell: 513-226-4488
Fax: 513-248-0711
Email wilmoth.roger@epa.gov

Talking points for George and Kevin for AACM Peer Review
Draft 8.22.08 rcw

- This is strictly a scientific review and this panel was convened for EPA's commitment to openness, transparency, and interest in producing the best possible scientific products. As such, the panel members MUST be impartial and be able to provide fair, objective, and unbiased reviews of the AACM documents.

- If any panel member cannot honestly evaluate the efforts impartially, then that member should disqualify himself or herself from participation on the panel and use other avenues to express those individual feelings.

- No AACM rulemaking activities are currently underway and such conjecture is not part of this review.

- Communities across the country are exposed to daily risks to their health, safety and welfare due to the presence of dangerous old structures that pose serious threats to the people of those communities. Terrible experiences with these old, abandoned buildings are documented in cities across America and thus compel us to seek a better way of dealing with this problem. This is a severe environmental justice issue.

- These are the results of the second and third AACM tests, and contain modifications to the test protocol gleaned from lessons learned from AACM1 and the peer review conducted for it.

- The asbestos NESHAP was the first of the air regulations and was promulgated in the 70's based upon best engineering judgment at that time. There was and still is very little data available to judge the effectiveness of the NESHAP protocols. The Agency recognizes the enforcement issues with the existing NESHPA process.

- These AACM studies represent the most comprehensive environmental evaluations of demolition practices to date.

- These studies were based upon a sampling protocol that was developed by a team of EPA and industry experts and was independently peer-reviewed as well.

- EPA will consider the panel summary comments and will publically respond and will revise the documents appropriately.

FACSIMILE COVER SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY
Region 6
OFFICE OF THE REGIONAL ADMINISTRATOR (6RA)

Date: August 11, 2008

TO: Kevin Teichman, DRA
Office of Research & Development

FAX #: 565-
202-564-2430

FROM: Larry Starfield
Deputy Regional Administrator (6RA-D)
U.S. Environmental Protection Agency
Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

Telephone: (214) 665-2100

FAX number: (214) 665-6648

NUMBER OF PAGES (including this cover sheet): 17

MESSAGE:

Kevin,

Attached are two documents. First, the comments of Mr. Oberta that were attached to the peer review report on AACM Demo #1, and second, comments delivered by Mr. Oberta at the community meeting in advance of the AACM Demonstration Project #3, in Fort Worth, Texas.

These documents seem to show a strong pre-disposition on the part of Mr. Oberta.

Larry

Lawrence Starfield/R6/USEPA/US
06/30/2008 04:01 PM

To Pat Gaspar/R6/USEPA/US
cc
bcc
Subject Fw: Engaging NEJAC on Alternative Asbestos Control Method Issue

Pls print
Sent by EPA Wireless E-Mail Services
Charles Lee
----- Original Message -----

From: Charles Lee
Sent: 06/30/2008 04:50 PM EDT
To: Granta Nakayama
Cc: Catherine McCabe; Lynn Buhl; Margaret Schneider; Lawrence Starfield; Heather Case; Kent Benjamin; Marla Hendriksson; Richard Albores; Joe Edgell; Victoria Robinson
Subject: Engaging NEJAC on Alternative Asbestos Control Method Issue

Grant

At the last Program Progress Review Meeting with Marcus Peacock, Marcus asked OEJ to provide recommendations regarding whether or not EPA should engage the NEJAC on the Alterative Asbestos Control Method (AACM). I have discussed this issue in detail with both Larry Starfield and Richard Moore. Richard is the NEJAC Chair. For the following reasons, both are in agreement with OEJ that EPA should not engage the NEJAC on this issue:

- Region 6 is pursuing an ongoing outreach effort to key stakeholders on the AACM and EPA progress, including Richard Moore. Given the complexity of the AACM issues and their highly volatile and polarized nature, we all agree that this is the most effective course of action.
- Given the nature of the issue, asking the NEJAC to provide advice will likely create a platform for public posturing on the part of outside interest groups, rather than the more low-key venue needed for thoughtful dialogue. This could seriously damage the NEJAC's public credibility and ability to function as a consensus body.

Since the last Program Progress Review Meeting, Mayor Greene had communicated with Marcus on this issue, and conveyed the above position. If you need any more information regarding this issue, please do not hesitate to contact me.

Charles

****

Charles Lee
Director
Office of Environmental Justice
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Andrew F. Oberta, MPH, CIH, The Environmental Consultancy

Mr. Oberta is an asbestos consultant with over 25 years of experience in the field. He submitted comments to the docket on May 30, 2007 and posted an illustrated and annotated version on his website at www.asbestosguru-oberta.com. The following summary of his comments was read during the public comment session at the peer review workshop. Mr. Oberta was the only member of the public who commented during that session.

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If someone ground up twenty square feet of asbestos floor tile and spread the pieces over a quarter-acre of land, we would agree that they have contaminated the soil. That is exactly what EPA did in the Fort Chaffee AACM project – not one, but twice.

The results of the soil analyses demonstrated that the long-standing EPA policy of permitting flooring materials to remain in a building that is demolished may not have been a wise decision. It should be re-examined at least and perhaps rescinded.

Another unintended consequence of leaving 3,992 ft² of asbestos-containing floor tile and mastic plus 252 ft² of linoleum with friable asbestos-containing backing in the buildings is the introduction of a variable not discussed in the report. These materials represent a source of airborne fiber release that could have affected the air sampling results. The implied assumption that no such fiber release occurred or that it affected the results for both tests equally is not defensible.

The amount of asbestos present in these flooring materials would far exceed that in the wallboard joint compound in the AACM building if the compound was limited to the spaces between the wallboard panels. However, the photos in the Draft Report and the EEG inspection report suggest that the walls were covered with a homogeneous surfacing material of constant thickness – perhaps plaster --without other discernable materials in the immediate area of the joint. We are left unsure of how much ACM was associated with the wallboard.

The air sampling results used to compare the two methods were inconclusive, primarily due to the large percentage of samples with zero structure counts. If anything, the results faintly suggest that the AACM creates higher airborne asbestos concentrations than the NESHAP method. No effort was made to compare these concentrations during either demolition to background levels or prevailing urban ambient concentrations.

The AACM demolition was preceded by saturating the wallboard with water containing a foaming agent, which was also sprayed on the building as it was demolished. Whether a contractor demolishing a building for low bid would spend the time and money to use this method properly, or would be able to operate the spray equipment and calibrate the mixture, is very doubtful based on my experience with asbestos abatement. To ask such a contractor to measure and adjust the conductivity of the mixture for proper foaming properties when they have trouble maintaining paint sprayers in working condition is unreasonable. What happens when the nozzle gets dropped in the dirt and plugged up?

The purported cost savings of 47% for the AACM compared to the NESHAP method are reduced to 31% when expenses for project design and oversight by the owner's representative and training of the contractor's workers are included. Unless the contractor is regularly engaged in asbestos abatement as well as demolition, their general liability insurance will exclude the work required by the AACM. Firms without asbestos coverage, which the owner would be foolish not to require, would not bid and the pool of potential contractors would be reduced. The biggest and most unpredictable cost variable, as acknowledged in the report, is the competitive nature of bidding for demolition work.

There are numerous technical errors, inconsistencies and questionable items in the report. ASTM and ISO methods for sampling and analysis are misrepresented. Prevailing industry practices described in ASTM asbestos control standards are not recognized.

The following statement appears on page 1 of the Introduction: "These data may be used to help EPA determine whether it is appropriate to include an alternative method in the current asbestos regulations contained in 40 CFR Part 61 Subpart M." If this statement signals EPA's intentions to amend the NESHAP to allow use of the AACM, it would be a serious mistake and compromise the protection of health and the environment. Exhibit 1 appears to represent a potential draft of the regulatory language that would describe how the AACM is to be used. This Exhibit has serious flaws, the foremost of which is allowing several asbestos-containing materials that should be removed to remain in the building during demolition. An equally serious omission from the exhibit is any consideration of vacating or protecting nearby residences and businesses, and measures to assure occupants of the safety of moving back into them.

I cannot endorse the AACM on the basis of this report any more than I could before the tests were conducted.

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Oberta's Written Comments Submitted to EPA During the Public Comment Period

Docket ID No. EPA–HQ–ORD–2007–0362
Page 1 of 14
Comparison of the Alternative Asbestos Control Method and the NESHAP Method for Demolition of Asbestos-Containing Buildings
Comments by Andrew F. Oberta, MPH, CIH
The Environmental Consultancy
May 30, 2007

INTRODUCTION AND SUMMARY

The findings of my review are summarized below and explained in detail in the body of this submittal.

• Two 4,500 ft² buildings, each containing 3,992 ft² of asbestos-containing floor tile and mastic plus 252 ft² of linoleum with friable asbestos-containing backing, were demolished in a demonstration at Fort Chaffee, AR. The first building demolished had 20,700 ft² of asbestos-containing wallboard removed immediately before the demolition, which was performed essentially dry. The wallboard was not removed from the second building but was saturated before demolition. A foaming agent was added to the water for dust suppression during the second demolition.

• Soil samples collected after demolition of both buildings contained a substantial amount of asbestos containing debris from the floor tile, linoleum and possibly previously-removed pipe insulation. The samples from the first building demolished (the "NESHAP" building) had more debris than those from the second ("AACM") building. These results suggest that asbestos-containing flooring materials should be removed before demolition of a building, particularly if the minimal amount of water used for dust suppression during the NESHAP demolition represents customary practices.

• Leaving the flooring materials in the buildings introduced a variable not discussed in the report. These materials represent a source of airborne fiber release that could have affected the air sampling results. The implied assumption that no such fiber release occurred or that it affected the results for both tests equally is not defensible.

• The air sampling results used to compare the two methods were inconclusive, primarily due to the large percentage of samples with zero structure counts. If anything, the results faintly suggest that the AACM creates higher airborne asbestos concentrations than the NESHAP method. No effort was made to compare the airborne asbestos concentrations during either demolition to background levels or prevailing urban ambient concentrations.

• The AACM demolition was preceded by saturating the wallboard with water containing a foaming agent, which was also sprayed on the building as it was demolished. Whether a contractor demolishing a building for low bid would spend the time and money to use this method properly, or would be able to maintain the spray equipment and calibrate the mixture, is very doubtful based on my experience on asbestos abatement projects.

• The purported cost savings of 47% for the AACM compared to the NESHAP method are reduced to 31% when expenses for necessary preparation and oversight by the owner's representative and training of the contractor's workers are included. The biggest and most unpredictable cost variable, as acknowledged in the report, is the competitive nature of bidding for demolition work.

• There are numerous technical errors, inconsistencies and questionable items in the report. ASTM and ISO methods for sampling and analysis are misrepresented. Prevailing industry practices described in

ASTM asbestos control standards are not recognized.

The following statement appears on page 1 of the Introduction: "These data may be used to help EPA determine whether it is appropriate to include an alternative method in the current asbestos regulations contained in 40 CFR Part 61 Subpart M." If this statement signals EPA's intentions to amend the NESHAP to allow use of the AACM, it would be a serious mistake and compromise the protection of health and the environment. Exhibit 1 appears to represent a potential draft of the regulatory language that would describe how the AACM is to be used. This Exhibit has serious flaws, the foremost of which is allowing several asbestos-containing materials (ACM) to remain in the building during demolition that should be removed. An equally serious omission from the exhibit is any consideration of vacating or protecting nearby residences and businesses, and measures to assure occupants of the safety of moving back into them.

I cannot endorse the AACM on the basis of this report any more than I could before the tests were conducted. If the NESHAP is amended to allow its use, my recommendation to building owners would be to follow the advice of a qualified asbestos professional who has inspected the building according to ASTM E2356 Standard Practice for Comprehensive Building Asbestos Surveys (1) and made an informed decision as to whether any asbestos-containing materials can remain in place during the demolition. The project should be conducted in the same stringent manner as any other abatement project, which is what the AACM amounts to. This includes a project design and proper oversight by the owner's representative and compliance with applicable state and local asbestos regulations. This is the only way that health and the environment can be adequately protected and that the owner can avoid possible liability including citations from regulatory authorities.

(1) All ASTM standards cited in these comments are available from www.astm.org or ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428.

DISCUSSION

Section 1 Introduction – A schedule showing the activities performed each day would help greatly in understanding the sequence and timing of events. Currently, this information has to be dug out of the text.

Exhibit 1, 2.0 Applicability – Is there a limit on the size of a building (floor space) other than the height and number of stories? It is conceivable that a 100,000 ft² single-story building could be demolished under these requirements.

Exhibit 1, 3.0 Building Inspection/Asbestos Assessment -- An "AHERA" inspection is not "comprehensive" because it allows exclusions for sampling and assessment based on friability and location of suspect materials. Exterior materials that are required to be sampled are specifically enumerated and non-friable materials are not assessed. Inspections for pre-demolition abatement projects should be done according to ASTM E2356 Standard Practice for Comprehensive Building Asbestos Surveys as Project Design Surveys, which requires all ACM regardless of friability and location to be identified.

Exhibit 1, 5.2 Wetting Process – Even amended water will not penetrate non-friable materials such as floor tile and asbestos-cement roofing or siding that the AACM allows to be left in place. A surfactant will, at best, allow the water to spread over the surface and contribute to the control of dust. However, the product used in this demonstration in no way resembles the amended water commonly used by abatement contractors.

This procedure assumes the existence of an attic, which I take to include a plenum above a lay-in or solid ceiling. Is the procedure modified if there is no attic or plenum?

Exhibit 1, Table 1 – ASTM E2356 discusses some of these materials in Appendix X1. SAMPLING TECHNIQUES AND EQUIPMENT in ways that suggest they should be removed prior to demolition rather than left in place according to Table 1.

Spray-applied surface coatings (popcorn ceiling) are covered in E2356 under X1.3.2.3 *Textured Finishes* and **Spray applied acoustical or decorative surfacing** is covered under *X1.3.2.2 Plaster* as friable materials. The ability to wet these inherently-dusty materials sufficiently to minimize the release of airborne fibers and debris with the AACM was not demonstrated. They should be removed before demolition.

Troweled-on crows foot texture, splatter texture, and joint compound combines very dissimilar materials. Joint compound is covered under *X1.3.3.3 Wallboard Systems* as a friable miscellaneous material along with texturizer, or skim coat, and the tape covering the joint. OSHA posted an interpretation on May 14, 1998 titled "Asbestos standard: Joint compound is not a surfacing material." A decision on whether these materials must be removed before demolition should be made by the project designer on the basis of multi-layer sampling and analysis.

Vibration-dampening cloths are covered under X1.3.3.5 *Vibration Dampeners* as a friable material. These items are woven from almost-pure chrysotile fiber and should be removed before demolition.

Linoleum or other floor tile are distinctly different materials. Linoleum is covered under X1.3.3.4 *Sheet Vinyl Flooring* containing a woven or matted backing with a high chrysotile content that is very friable. If this backing is present the flooring should be removed before demolition as the amended water will not penetrate the vinyl facing.

Ceiling tile is covered under *X1.3.3.1 Acoustical Ceiling Tiles* as a friable material, as are X1.3.3.2 *Glued-on Tiles*. The former often contain amosite and the latter may be attached to the deck or ceiling with asbestos-containing mastic. These tiles should be removed before demolition as the ability of the AACM wetting agent to penetrate to the substrate has not been demonstrated.

The decision whether to remove any ACM or leave it in place during demolition should be left to the project designer with a default to removal if the possibility exists of generating debris or releasing fibers.

Exhibit 1, 5.3 Demolition Process and 5.4 Visible Emissions – It may be naïve to expect the demolition contractor to "minimize breakage of asbestos-containing materials" and to expect the demolition contractor's NESHAP-trained individual "to stop work if visible emissions are observed." The AACM process suffers from the same lack of independent oversight by the owner's representative as the current NESHAP. Fortunately, such oversight is required by some state regulations as well as consensus standards such as ASTM E1368 Standard Practice for Visual Inspection of Asbestos Abatement Projects.

2.1 Primary Objectives – Primary Objective 2 states: "The AACM requires soil excavation following demolition and the NESHAP Method does not." Why not? As seen later, the soil around the NESHAP building was just as contaminated after demolition as the soil around the AACM building. Primary Objective 4 should be to compare airborne asbestos (TEM) concentrations during the NESHAP and AACM demolitions to the background TEM concentrations and to prevailing urban ambient concentrations.

2.2.3 Worker -- Objective 9a should be to determine whether worker exposure using the AACM can be statistically shown to comply with the OSHA Permissible Exposure Limits of 0.1 f/cc for an 8-hr TWA and 1.0 f/cc for the 30-minute excursion level. Comparisons are made later in the report (4.1.3.3.3 and 6.1.5.1) but no statistical analysis was performed.

3.2 Site Description – Most buildings that the AACM appears intended for will not have had the benefit of previous asbestos abatement. They may also have been subject to maintenance, vandalism, neglect and other activities that result in disturbance of asbestos-containing materials and the presence of debris that would need to be cleaned up before an AACM demolition began.

3.3.1 Asbestos Inspection of Buildings – Reference has previously been made to the limitations of an "AHERA" inspection and to ASTM E2356 Standard Practice for Comprehensive Building Asbestos Surveys. Figure 3-5 in the Draft Report has been cropped horizontally from Figure 1 in the EEG inspection report, which shows a section approximately 3.5" wide. As the EEG report states on page 9 that 2" and 3" hole saws were used to obtain the samples, the question is whether this picture is on a section through a joint that was not a sample but obtained separately.

What is labeled "joint compound" in the EEG Figure 1 is ~1/8" thick at the edges of the picture and does not appear to decrease in thickness. This suggests it may be a layer of plaster and not joint compound, which would make it surfacing material. Were any samples taken of this material between the joints? The answer affects the relative contributions of this layer and the flooring materials. If 20,700 ft² of wallboard is covered with 1/8" of plaster containing 10 – 19% asbestos, the amount of asbestos available for release from this plaster is roughly five times that in the 4,244 ft² of floor tile and linoleum backing of equal thickness with 10 - 25% asbestos. If, however, only the joint compound itself – between the wallboard sheets at four foot intervals – contains asbestos, the flooring materials constitute a much larger, even a predominant, amount of potential fiber release.

The EEG report also states "In the laboratory the full-depth core sample was separated into its discrete layers (***Figure 1***) for analysis." Was this done using the dimension d2 in Figure 3-5 of the Draft Report? What is the basis for the width of the seam in the absence of joint tape or other defining components of the wallboard system? The "Joint Interval Composite" percents in Table 3-1 calculated from these dimensions should not depend on an arbitrary reference point.

Table 3-1 has a single line for mastic in each building, whereas the lab reports (EEG pages 110 – 115 of PDF file) show brown/tan for the linoleum and black for the tile. The latter was not gravimetrically analyzed as a separate layer, even though it qualifies as a non-friable organically bound (NOB) and has a high probability of containing asbestos.

The lab reports also list a white tape as part of the joint sample, which is not listed in Table 3-1 or in the body of the EEG report and is not apparent in the photos.

3.3.3 Concentrations of Asbestos in Soil – When were these (nine) samples taken? They do not appear to be the same (ten) samples for each building that appear in the remainder of the report.

4.1.3.1 Background Air Monitoring – Are these the samples in Table A-4 that were taken on January 11, 2006? Where were these samplers in relation to those shown in Figure 4-1? The report states that these samples were taken "to collect data necessary for potential comparison of air concentrations of asbestos and total fibers during demolition." However, it is not clear what comparison is meant here, and the concentrations during the demolitions were not compared to background levels.

4.1.3.2 Perimeter Air Asbestos, Total Fibers, Settled Dust, and Particulate Sampling During Demolition – Page 30, 5th paragraph: The pumps shown are capable of pulling more than 4 lpm. Although the 1920 – 2400 L volumes exceed that for ambient samples at many abatement sites, higher volumes would have increased the number of samples with one or more structures counted. Once it became apparent that filter over-loading was not a problem, was any consideration given to increasing the flow rate and thus the sample volumes?

4.1.3.3.1 Discharge Air Sampling During Asbestos Abatement of NESHAP Building – In response to an inquiry, EPA informed me that the isokinetic sampling was done according to the following reference: Quantitative Evaluation of HEPA Filtration Systems at Asbestos Abatement Sites, Roger C. Wilmoth et al. *Environmental Choices Technical Supplement*, Vol. 2, No. 1, Fall 1993. Environmental Information Association, Chevy Chase, MD. This article describes a series of tests where samples were taken in ducts attached to HEPA-filtration units. To achieve isokinetic velocity, the cap was left on the 25mm cassettes, which presumably faced into the airstream, the plug removed and a tube inserted into the hole. The filters were analyzed by TEM with indirect preparation to overcome the problem (not discussed in the article) of uneven fiber distribution on the filter. This methodology is not described in this Draft Report and without information on the air flow rates through the HEPA-filtration units and the sampling cassettes, and the diameter of the inlet tube, the existence of isokineticity cannot be confirmed.

~~One learns from Table 4-1 that these filters were analyzed by TEM but Tables 5-1 and 5-2 do not~~ mention them. However, Table 6-16 also gives results for PCM analysis in f/cm^3, which raises the question of how fiber counts were done on asymmetrically-loaded filters that were also indirectlyprepped for TEM analysis. It is implied that ISO 10312 was used but that is a direct prep method.

4.1.3.3.2 Personal Breathing Zone Sampling During Abatement -- With ~81 man-days of abatement, why were only six personal samples collected for worker exposure? On which day out of the nine during which abatement was conducted were these samples taken?

4.1.3.3.3 Personal Breathing Zone Sampling During Demolition – I believe the text should read: "For each of the two building demolitions, samples were collected during the sampling *demolition* periods to calculate the time-weighted average (TWA) concentration for comparison to the OSHA Permissible Exposure Limit for Asbestos (29 CFR §1926.1101).." However, Objectives 8 and 9 refer to comparing concentrations between the NESHAP and AACM methods – comparison to the OSHA PELs would be an additional objective, which is identified in my comment on 2.2.3.

No personal samples were taken during pre-wetting of the AACM building on the day before it was demolished. During this time the workers were dragging hoses through the building, moving ladders and doing other things that could have released airborne fibers from the asbestos-containing wallboard joint compound. Their exposure should have been monitored.

APPENDIX C Procedures for Visual Inspection and Clearance of Project Sequence of the EEG SPECIFICATIONS & DRAWINGS FOR ASBESTOS ABATEMENT PROJECT requires a visual inspection that closely follows the sequence in ASTM E1368 Standard Practice for Visual Inspection of Asbestos Abatement Projects and clearance by air sampling with PCM analysis. Other than a statement here that "The EPA and contractor staff inspected the abated area following acceptance ..." and another in Section 8 about "... clearance testing by a licensed asbestos consultant;" there is no mention in this Draft Report that the visual inspection and clearance procedures in the specification were carried out. There are no air sample results for the clearance testing.

4.3.3 Cross-contamination control – Imagine yourself living in a house across the street from one being

demolished by the AACM. You would ask the following questions: "Will my family be re-located during the work and at whose expense? Will my house and yard be covered with plastic as in Figure 4-16? Will my house and yard be inspected and cleaned if necessary so it is safe to move back in?" These questions may not have arisen in the context of this demonstration project but will undoubtedly be asked if an AACM demolition is proposed.

4.4.2.1 Amended Water System – Page 49: The Kidde Fire Fighting NF-3000 Class "A" Foam Concentrate is a respiratory, eye and skin irritant according to the MSDS and handling it requires appropriate PPE. Figure 4-25 shows a worker wearing a full-facepiece negative pressure respirator with P100 cartridges during application of the foam, but would a demolition contractor have the necessary PPE for the workers who are handling the concentrate?

Page 50, 1st paragraph: What would the cost be for such a system if a contractor had to buy or rent it? The remainder of page 50, Table 4-4 and Figure 4-22 describe conductivity measurements to calibrate the foam concentration. Is it realistic to expect a contractor to do this on an actual project under time and cost constraints?

4.4.2.2 AACM Pre-Wetting – Would ordinary amended or just soapy water have saturated the walls and ceilings equally as well as the foam? Is the foam necessary to penetrating the wallboard or does it just sit on the surface?

4.4.2.3 AACM Demolition Phase – Page 52, last paragraph, describes problems with the foaming nozzles, which appear related to the footnotes to Table 4-4 about "non-foam proportioning." Even the simple spray equipment used at abatement sites frequently malfunctions and workers are continually cleaning, adjusting and repairing the spray nozzles and pumps. If the AACM depends on using a complicated foaming device as was done on this project, contractors will not spend the time to keep it operating properly. They will just spray the building with amended (or plain) water, which may be adequate for the purpose intended, but this project did not show that to be the case.

5.2.4.1 Soil Preparation – Under what magnification was the soil examined for the presence of building debris? Was the mass of the debris pieces determined by weighing them or by inference from the PLM visual estimate?

5.2.4.2 Soil Analysis (TEM and PLM) – The pieces of debris that were picked out of the soil don't seem to have been subjected to the same gravimetric and point-counting procedures as the soil, which included the pieces of debris that were not removed.

5.2.5 Settled Dust Samples (TEM) – The reference to ASTM D5755 in this paragraph and Tables 5-1 and 5-2 is inappropriate. These samples were not collected, prepared or analyzed according to either D5755 or D1739 (referenced in 5.1.6) but a combination of methods loosely resembling both.

- D1739 requires gravimetric analysis, not TEM. It is meant to measure particulate fallout, not fibers or structures.

- D5755 requires microvacuum sampling of surfaces. There is no apparent reason why this could not have been done.

- The fallout container had a volume of 5555 cm^3, a surface area of 1642 cm^2 and was rinsed with 300 ml of solution. The cassette used in the D5755 method has a volume of 25 cm^3 and a surface area of 47 cm^2; it is filled with 10 ml of rinse solution and shaken, then this solution is added to 75 ml used to further rinse the cassette.

• D5755 uses an indirect preparation method for TEM analysis of aliquots from the rinse solution that are filtered; the cassette filter is not analyzed. ISO 10312 is a direct preparation method where the filter in the cassette is analyzed by TEM.

• D5755 and ISO 10312 have different grid opening requirements and stopping rules (Tables 5-1 and 5-2).

The settled dust (mud?) results are of little consequence to this study and the method certainly would not be used on an actual project. However, the deviations from the referenced ASTM and ISO methods should have been more fully explained.

Section 6 RESULTS – Due to the large number of non-detects, the conclusions are based more on the absence of asbestos structures in the samples than on their presence. The statement at the top of page 74 may be more candid and revealing than the authors intended: "...any conclusions that are based upon counts less than four, as almost all the ones in this study were, should be used with some caution."

6.1.2.1.2 Demolition Air – The highest recorded concentrations are 0.0015 s/cm³ for the NESHAP building and 0.0019 f/cm³ for the AACM building. These are compared – favorably – on page 80 to various clearance limits in the US. Other countries have stricter limits, e.g. the guidance limit in Israel for asbestos in ambient air is 0.0014 f/cm³ measured by SEM. Moreover, the limits in the penultimate paragraph on page 80 are not directly comparable: the AHERA limit is based on analytical sensitivity and not a health-based standard; the AHERA, Katrina and WTC limits are for re-occupancy of indoor environments, not outdoor exposures. The last paragraph admits that the AACM demolition concentrations were statistically higher than the NESHAP values.

6.1.2.2 Asbestos in Settled Dust – A footnote to Table A-7 gives a surface area of 181.5 cm² that was presumably used to calculate the surface loading (not concentration as in the titles of Table 6-4 and Figure 6-6). This is the area of the bottom of the can. How were the bottoms of the cans rinsed without also rinsing the sides? It is hard to believe that all of the dust particles, water droplets and floating fibers fell straight down into the can without touching and sticking to the sides. If the sides were also rinsed, the total area of 1642 cm² should have been used in the calculations, which would reduce the surface loadings by almost an order of magnitude. This would place even the highest loadings below the WTC and Libby criteria, for what that is worth.

6.1.2.2.1.1 Background Air -- Table 6-5 is titled in part "...total fibers (PCM) prior to demolition..." and the units are f/cm³. However, Table A-4 lists five samples analyzed by TEM and none by PCM. No structures were counted on any of the filters, a fact not mentioned here. Nor is it stated that the samples were taken four months before the demolitions and not immediately preceding the work.
6.1.4.2.1 Soil Fraction – Table 6-11 summarizes the analyses of the soil fraction (Fraction 01) from which rocks/organics (Fraction 02) and building debris (Fraction 03) had been removed. Thus, the soil in Fraction 01 was at least "visibly clean" and, if examined under magnification, even cleaner. Fraction 01 was then separated into sub-fractions for analysis by TEM and point-counting (1000 points) by PLM. The sub-fractions were gravimetrically reduced by ashing and acid-rinsing before the analyses.

The text on page 90 doesn't mention the two pre-demolition AACM samples (9 and 10) with 0.11% and 0.33% asbestos by PLM/point-counting. The latter represents 34 gm – over an ounce – of asbestos and if it consisted of one fragment of debris, or even a few fragments, it may have been visible debris that was not extracted from the sample before splitting it into the three fractions. Perhaps this material belongs in Fraction 03.

The conclusion that the pre-demolition debris came from pipe insulation is logical, as pipes ran in the crawl spaces under buildings such as these. This does not account for pre-demolition NESHAP sample 9, however, which was identified as VAT. The next italicized paragraph addresses Primary Objective 2, comparing post-excavation AACM soil to post-demolition NESHAP soil. First, I consider this a meaningless comparison. The comparison should have been to the post-demolition soil for both buildings.

Second, if post-demolition NESHAP sample 7 – which contained the equivalent of 32 gm of asbestos – was a debris fragment (or fragments) that should have been extracted and put in Fraction 03, that would have changed the results in Table 6-11 and perhaps the conclusion for Primary Objective 2. This suggests that removing the building debris not only biased the analyses of Fraction 01 toward the low side but that it may have been done inconsistently. Needless to say, Fraction 03 was affected as well. There is a very poor correlation between the PLM point-counting results and the TEM results for the two samples just discussed when one calculates the mass of asbestos on the filters. For post-demolition NESHAP sample 7, the 0.34% asbestos by PLM translates to 4.42E-07 gm while the 110 structures by TEM in the same sample gives 7.33E-08 gm, a 6x difference. For pre-demolition AACM sample 10, 0.33% by PLM gives 3.63E-07 gm vs 1.18E-08 gm for the 136 structures by TEM, a 30x difference. Are such variations typical when comparing PLM point-counting and TEM results from similar samples?

6.1.4.2.3 Building Debris Fraction -- What method was used to visually estimate the asbestos content of Fraction 03 by PLM to two decimal places? Were the debris fragments gravimetrically reduced or was a stratified point-count method used, or both? If the asbestos content could be visually estimated to two decimal places, why are some shown as "<1" percent? If these were visually estimated between 0,01% and 0,99% they should be shown as such. If no asbestos fibers were found, they are "ND" or 0%. The <1% regulatory definition of ACM has no meaning here.

The text on pages 93 and 94 attributes nearly all of the soil contamination to the VAT. Table A-13, which is not discussed in the text, shows this to be an exaggeration for the NESHAP building. Dividing sums of the VAT and "other" ACM weights by the sum of the weights of all the original samples gives 90% for the VAT and 10% for the "other," not 98% and 2%. The "other" could have come from the backing on the linoleum or pipe insulation removed in 1999.

If the percents of building debris in Table 6-12 were determined by visual estimation and those in Table 6-13 by weighing the VAT fragments, the numbers are not directly comparable. If they were, one might conclude that the 0.28% mean weight of building debris in the NESHAP soil samples consisted of 0.07% VAT and 0.21% "other" debris. For the AACM samples it would be 0.07% VAT out of 0.87%, with 0.80% being "other" debris. This is not consistent with Table A-13. Accepting the figures in Table 6-13, rough calculations show that the mean of 0.07% by weight of VAT fragments in the ½" deep post-demolition NESHAP soil samples is the equivalent of 18 ft² of VAT, or 0.46% of the total in the building. The AACM amount would be slightly higher. There would also be mastic associated with this debris. *This would seem to be an unacceptable degree of soil contamination regardless of the abatement and demolitions methods used.*

The post-excavation AACM data in Table 6-13 and Figure 6-12 do not match the figures in Table A-13. The latter are identical to those for the post-demolition AACM samples immediately above, except for the number of decimal places. This appears to be an editorial mistake, but it renders comparison of these samples to any other sample set – for what it's worth – difficult.

6.1.5.1.1 Demolition and Abatement Workers -- To compare the entire sequence of both methods,

Table 6-16 should show the exposure of the workers who pre-wet the AACM building. Unfortunately, no worker monitoring was performed during pre-wetting. Therefore, the conclusions at the end of this section are based on an incomplete data set.

6.1.5.1.3 The statement in the second paragraph refers only to the TEM samples. Figure 6-15 is missing exposure data for AACM workers during pre-wetting and the conclusions in the last paragraph reflect this omission.

SECTION 7 STATISTICAL ANALYSES – One of the primary objectives should have been to compare the airborne asbestos TEM concentrations during both demolitions to the background airborne asbestos TEM concentrations and to prevailing urban ambient air levels. Data for the background comparison, shown in Tables 6-5 and A-4, are unfortunately limited in number and all yielded zero structure counts. Still, the null hypothesis that the demolition did not raise airborne asbestos TEM concentrations above background should have been tested separately for both methods. *Rejecting the null hypothesis casts doubt on the advisability of leaving floor tile and linoleum in a building during demolition.*

Data on asbestos TEM concentrations in urban air have been published for many years, including a compilation in the HEI-AR report of 1991. More recent compilations are no doubt available. A statistical comparison of published ambient concentrations to the levels measured during demolition of the buildings would be of interest.

7.1 Primary Objective 1 – This objective compares airborne asbestos contamination during demolition of two buildings with 3,992 ft² of non-friable floor tile and its underlying mastic plus 252 ft² of linoleum with friable backing. The fact that the 20,700 ft² of wallboard in the NESHAP building had been "meticulously removed" had no bearing on contamination levels during demolition, assuming that the abatement, visual inspection and clearance testing were done according to the EEG specification. The wallboard remained in the AACM building but, unlike the NESHAP building, it was saturated and foamed during the demolition. Thus, the variables are the absence of the wallboard during essentially dry demolition (NESHAP) and presence of the wallboard during wet demolition (AACM) with the presence of floor tile, mastic and linoleum common to both.

The statistical analysis dealt largely with the handling of the non-detects -- zero structure counts -- due to the small number of positive samples where at least (and usually) one structure was detected. Thus, the conclusions are based more on what was not found on the filters than what was (barely) found. For no reason other than referencing the QAPP, data from Ring 2 were not used in this analysis, so a value of 0.0015 s/cm³ during the NESHAP demolition was ignored. The conclusion from the statistical analysis was that the airborne asbestos contamination generated during the AACM demolition was higher than during the NESHAP contamination. *This does not argue well for acceptance of the AACM.* How much the floor tile, fragments of which were found in the soil after demolition, and the linoleum backing contributed to the airborne concentrations is not known but could be significant as it may have affected the results of both demolitions differently. Was the assumption that the floor tile and linoleum would not contribute to the contamination levels, or that it would be the same for both buildings? Either would be a dangerous assumption.

7.2 Primary Objective 2 – The post-demolition NESHAP soil results for Fraction 01 on which this objective depends were questioned in my comments on 6.1.4.2.1. The other pertinent results are the post-excavation AACM Fraction 1 soil results. Table 7-3 shows the soil to be clean by the TEM results, but do the PLM results agree?

The data for Fraction 03 for post-demolition AACM soil and post-excavation AACM soil do indicate a

difference in the average asbestos content by PLM visual estimation: 0.87% for the former vs 0.32% for the latter. (The "<1" values were changed to 0.01 for this calculation.) However, the distributions overlap. In a practical sense, could two inches of depth be expected to have much effect on samples of soil that has been run over by a tracked vehicle?

7.7 Secondary Objective 8 – Table 7-19 does not include samples during pre-wetting of the AACM building because none were taken. Using data from Table A-9, a comparison of the samples during demolition only (without the walkers) affirms that the exposure during the AACM demolition (mean = 0.0098 f/cm³; 95% UCL = 0.0180 f/cm³) is much less than during the NESHAP demolition (mean = 0.0351 f/cm³; 95% UCL = 0.0781 f/cm³). Considering that a wet demolition is being compared to a dry one, this should surprise no one.

The abatement samples should not be included in the comparison. In Table A-10, the "ND" entries for the NESHAP abatement are <0.0017 f/cm³ and <0.0032 f/cm³ with both equal to the limit of detection. Excluding the sample for Worker 5 (<0.0032 f/cm³) because of its very short duration (possibly a pump failure) gives a mean concentration of 0.0621 f/cm³ and a 95% UCL of 0.1424 f/cm³. Although comparison to the OSHA PEL is not an objective, this result suggests that the wallboard may not have been "adequately wet" before removal.

The duration of sampling is unclear. For the NESHAP abatement, an 8 to 10 hr work shift is mentioned in 4.1.1.3.1 and the flow rate for personal samples is given in 5.1.2 as "either one or two liters per minute. An air volume of approximately 480 to 960 liters was targeted for these samples." The data in Table A-10 suggest that the samples were taken during a 10-hr work day. Because these workers had exposure for an entire 8-hr shift and then some, there is no "zero exposure time" by which to adjust their exposure. Based on the sample volumes, ASB-2, 3, 4 and 6 were apparently taken at 2 lpm and ASB-1 at 1 lpm; the 60-L ASB-5 could have been either and probably represents a pump failure. It is unclear from Table A-9 whether the AACM demolition took twice as long as the NESHAP demolition or whether the former samples were taken at 2 lpm and the latter at 1 lpm.

Although "All field blanks had non-detected asbestos concentrations at <7 s/mm," (9.3.1.2) there is no record of blanks for the personal samples taken for worker monitoring having been analyzed by PCM as required by 29CFR1926.1101 Appendix A or by NIOSH Method 7400.

The personal sample results have implications for respiratory protection requirements under OSHA's revisions to 29CFR1926.1101(h)(3)(iv) on August 24, 2006. Demolition of a building with asbestos containing
wallboard is OSHA Class II work. It is Class I if friable materials such as "popcorn
ceilings" are left in the building as contemplated in Exhibit 1, Table 1. In the latter case, the OSHA standard would require the demolition workers to use powered air-purifying respirators until exposure monitoring showed that the PELs were not likely to be exceeded.

7.12 Additional Secondary Objective – There is room in Table 7-15 to add columns for the VAT and other debris before the column "%ACM BY WEIGHT," which I assume includes both. My calculations for the average %ACM (including VAT and other) using data in Table A-13 are reasonably close to the values in Table 7-15 for the post-demolition NESHAP soil: 0.075% vs 0.086%. The data for the post-excavation AACM soil, however, are not in Table A-13, nor are the soil sample weights or VAT/other debris weights (see comment on 6.1.4.2.3). If the lower half of Table 7-15 is correct, the average asbestos content of 0.014% is, in fact, lower than for the post-demolition NESHAP samples. These distributions do not overlap. The question remains, however, whether this is a meaningful comparison. Also, if the post-excavation AACM debris consists entirely of VAT fragments, it constitutes an additional 0.09% of the installed VAT in the building, for a total of 0.61%

that found its way into the soil underneath and around the building. (See comments on 6.1.4.2.3)

SECTION 8 COST COMPARISON – This section documents substantial savings for the AACM demolition over the NESHAP abatement and demolition. These savings were realized with the demolition contractor working under intensive scrutiny by EPA and their designees in the context of a research project. Absent such oversight and with the emphasis on productivity and cost control common to a competitive bidding environment, further savings could undoubtedly be achieved. The costs in Table 8-1 are well-documented in the text and mostly reflect actual or pro-rated charges. I do not challenge them *insofar as they pertain to this specific demonstration.* Table 8-2 on the following page, however, presents my estimate of what it would cost to demolish the AACM building under "real world" conditions.

This table breaks out costs for an owner's representative and a demolition contractor. The Draft Report emphasizes the demolition aspects of taking down the AACM building while down-playing the fact that this work includes removal of ACM from the building and its disposal, making the job an abatement project subject to not only EPA but OSHA and state regulations. Most states that regulate asbestos abatement will require that it be done under the cognizance of an owner's representative independent of the demolition contractor and that plans and specifications be prepared for the work. Some may require the work to be done by a licensed asbestos abatement contractor, an assumption that Table 8-2 does not make. Participation by an owner's representative in the capacity of a consultant and ~~project monitor is required by ASTM E1368 Standard Practice for Visual Inspection of Asbestos~~ Abatement Projects as well as the National Institute of Building Sciences *Asbestos Abatement and Management in Buildings: Model Guide Specification.*

Pre-demolition
The NESHAP does not define a "thorough inspection" before a renovation or demolition. The industry standard for such an inspection is not an "AHERA survey" but a Project Design Survey according to ASTM E2356 Standard Practice for Comprehensive Building Asbestos Surveys. The cost of this survey in Table 8-2 has been increased to $3,000 to allow for collection of information to prepare the plans and specifications in addition to collecting and analyzing bulk samples

If and only if the Project Design Survey determines that no ACM needs to be removed by an abatement contractor and an accredited project designer so attests (which could be challenged and subject him to a citation and other liabilities) should demolition by the AACM proceed.

Plans and specifications need to be prepared by the accredited project designer because ACM will be disturbed and removed in the course of demolishing the building. The procedures for pre-wetting the ACM, wetting it during demolition, loading the trucks, disposal at the landfill and all associated cleanup must be described. The cost of preparing the plans and specifications is reduced from the NESHAP figure to $3,500 in recognition that certain activities and requirements for conventional abatement need not be described.

Site mobilization by the contractor has been increased to $5,000 to allow for construction and operation of decontamination facilities for personnel.

OSHA would consider this Class II work under 29CFR1926.1101 and require that the workers receive 8 hours of training and the supervisors an additional 4 hours. This training can be provided by the owner's on-site representative (project monitor), for which a daily rate of $400 reflects the absence of air monitoring services on days while training is being conducted. The contractor's labor rates for 14 workers and two supervisors approximate the $45/hr average in paragraph 8.2.5. The demolition crew will need to be fit-tested for respirators and there are other costs to the employer such as medical

examinations and training associated with a respiratory protection program.

Table 8-2. Adjusted costs for AACM

Cost Item	Cost		
	Owner's Representative	Demolition Contractor	Total
Pre-Demolition			
Project Design Survey per ASTM E2356	$3,000		
Asbestos abatement sections of demolition specifications (Preparation and bidding)	$3,500		
Site mobilization and demobilization		$5,000	
Training - OSHA Class II (8 hrs) for 14 workers ($40/hr)	$400	$4,480	
Training - OSHA Class II (12 hrs) for two supervisors ($50/hr)	$200	$1,200	
Sub-total	**$7,100**	**$10,680**	**$17,780**
Building Demolition			
Preparation oversight and monitoring (2 men, 1 day @ $500/man-day)	$1,000		
Demolition oversight and monitoring (2 men, 2 days @ $500/man-day)	$1,000		
Excavation oversight and monitoring (1 man, 1 day @ $500/man-day)	$500		
OSHA compliance monitoring		$1,000	
Excavator		$2,400	
Labor		$10,035	
Wetting surfactant		$2,165	
Foaming equipment rental		$1,000	
Conductivity testing rental		$500	
PPE (respirators and clothing)		$1,000	
Sub-total	**$2,500**	**$18,100**	**$20,600**
Construction Debris T&D (asbestos and non-asbestos)			
T&D oversight (1 day)	$500		
Transportation		$6,143	
Scaffold for lining of trucks and liners		$7,078	
Asbestos waste disposal		$18,660	
Non-asbestos waste disposal		$2,678	
Water collection and disposal		$570	
Close-out documentation	$500		
Sub-total	**$1,000**	**$35,129**	**$36,129**
TOTAL COST	**$10,600**	**$63,909**	**$74,509**

Building Demolition

Coverage by two on-site project monitors for the first three days of demolition, including air monitoring for the owner's purposes, is shown. This would not be nearly as extensive as during the demonstration and analysis of samples by PCM would be expected. Coverage by one project monitor

during excavation on the fourth day is shown.

The contractor's costs are taken for excavation, labor and wetting surfactant directly from Table 8-1. OSHA compliance monitoring is reduced to $1,000 by eliminating lead – assuming the contractor actually gets it done by a third party (not the project monitor). As it is unlikely the local fire company will send a foaming truck, $1,000 is shown to rent this equipment. The necessary equipment for conductivity testing will have to be rented and this cost is shown as $500.

Construction Debris T&D
One day of project monitor oversight and final close-out documentation are the only costs for the owner's representative, shown as $500 each. The costs for the contractor are taken directly from Table 8-1. Not to dispute that the contractor spent $7,078 on scaffolding during the demonstration for lining the trucks, I question whether they would go to that effort and expense were they not under the watchful eye of the federal government.

Summary of costs
The total cost for the owner's representative is $10,600 and for the contractor is $63,909, for an overall total of $74,509. Instead of the $50,967 (47%) difference between the NESHAP and AACM costs in Table 8-1, the difference in Table 8-2 is $33,822 (31%). The 4,500 ft² floor space is not necessarily the most appropriate basis for calculating unit costs: they could also be figured on the basis of the 20,700 ft² of wallboard or the combined 4,244 ft² of floor tile and linoleum.

Other costs
Two costs of potentially major significance are not shown in either table. It may be necessary, for community relations purposes if no other reason, to temporarily re-locate occupants of buildings in the vicinity of the one(s) being demolished. The size of such a "buffer zone" will depend on many intangibles and affect the costs accordingly. Business interruption and temporary lodging of residents are two of the costs. Also, it may be necessary (or at least prudent) to cover buildings with plastic as shown in Figure 4-16, and to inspect the buildings after the demolition is complete, in a manner that will convince occupants it is "safe" to move back in.

This section concludes by recognizing the competitive factors in the construction industry – including abatement and demolition – that could drive the costs for either approach up or down. A major cost that is not shown as a direct expense in either table is the contractor's general liability insurance. Unless the firm is regularly engaged in asbestos abatement as well as demolition, its insurance will exclude the work required by the AACM. Firms without asbestos coverage, which the owner would be foolish not to require, would not bid and the pool of potential contractors would be reduced.

CONCLUSIONS

The demonstration project did not provide conclusive evidence that the AACM is comparable to current NESHAP methods insofar as the most important metric of airborne fiber concentrations is concerned; in fact, the statistical analysis shows it to be slightly inferior. A major deficiency was the failure to compare fiber concentrations during the demolitions to previously-measured background levels or to prevailing urban concentrations.

To achieve even this level of fiber control required using a foaming method that is beyond the capabilities or inclinations of the contractors who would be doing this work. The "cost savings" are substantially reduced when the expense of adequate preparation, oversight and training are considered. If anything, the demonstration showed that leaving asbestos flooring materials in a building while it is demolished is not advisable, as high concentrations of debris were found in the soil after the both buildings were demolished. The extent to which the presence of these materials in both buildings

affected the airborne fiber levels on which the primary objectives depended cannot be known.

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Mr. Oberta has over 25 years of experience as an asbestos consultant. His work has been internationally-recognized and extensively published and presented. He chairs the ASTM Task Group on Asbestos Management and is the author of the ASTM Manual on Asbestos Control: Surveys, Removal and Management.

The opinions expressed herein are entirely his own and these comments were prepared without financial or other support by, or in collaboration with, any individual or organization. A version of these comments has been posted on his website at www.asbestosguru-oberta.com/aacm.htm.

108

9. Closing Remarks

At the end of the meeting, Webber asked each reviewer to provide closing comments.

9.1 First Reviewer

This test provided good results. I am pleased with the low air counts from the test and the method, as long as EPA does not refer to them as *de minimis*. The reviewers have had many suggestions for improving the research methodology and the AACM itself. Nevertheless, the test results are good, interesting, and certainly worth proceeding with. I am not endorsing the method because I am not convinced it is endorsable at this point. However, the study has provided good data and we should recognize that. The results are good.

I am going to reference the December 19th, 2003, Office of Inspector General (OIG), Environmental Protection Agency, Significant Modifications Needed to Ensure Success of Fort Worth Asbestos Demolition Method. This started the ball rolling toward where we are today. OIG asked three questions:

> 1) Is the design and methodology of the Fort Worth Method - Phase II adequate to demonstrate protection of human health and the environment?

The answer was "no."

> 2) Does the Fort Worth Method - Phase II meet EPA's key Project XL criteria, including superior environmental performance, regulatory flexibility, adequate stakeholder involvement, and transferability to other asbestos demolition projects?

The answer was "no."

> 3) Has EPA's oversight to date ensured that the Fort Worth - Phase II project will allow EPA to reach valid conclusions on the effectiveness of such demolition techniques for each type of asbestos?

The answer was "no."

Things have changed since then. The Agency has looked at the procedures, changed them, and run other tests. These three fundamental questions are still good guiding principles to future research, and the comments we have made at this workshop have largely fallen within these three categories. Our comments have largely addressed these good guiding principles, and I hope that they will be helpful to the Agency.

9.2 Second Reviewer

I agree. At this stage, the work is not "a be all and end all" or ready to serve as the basis to issue instructions for people to work by. However, with the type of input we have provided, it is

definitely worth continuing to experiment on the system. Once the system is sufficiently refined to work right, it likely will have value and could be used in many places, particularly if the rules are not so rigid that they preclude improvisation.

Berms are one example. Do we tell people how high the berm should be and what it should be made of? How would that be handled in a major city where you cannot dig a berm? Supposing a berm is made out of rubber pieces that are assembled in 10-foot strips and covered with poly. When the job is over, if the berm was properly covered with poly, the contractor could pick up the rubber components and use them on the next project. This approach would work if the requirements specify that the berm must contain the water, but not how to build the berm.

More work should be done to develop the method because there will be places it can be used, save money, and not create pollution problems for either workers or the public.

9.3 Third Reviewer

I would like to provide a few specific comments I have not brought up yet. On page 2 (Introduction) of the report, 4th full paragraph, first sentence, it says: "The RACM is less likely to become friable when the wetting process…" I recommend this be changed to say: "The RACM is less likely to become airborne when the wetting process…" because friability is not the condition of the material. The RACM is less likely to become "airborne" instead of "friable."[3]

Concerning classification of materials in Table 1 of Exhibit 1 on page 6 of the report, the table classifies different materials according to the AHERA (Asbestos Hazard and Emergency Response Act) classification. Under AHERA, "mastic for flooring" and "window caulking" are not "surfacing materials" and should be moved to the "miscellaneous" category.[4]

"Vermiculite insulation," now under "miscellaneous material" should be under "thermal system."[5]

On page 20, Section 3.3.1, EPA uses "RACM" when they should be using "ACM." EPA should replace the first sentence…:

> "A comprehensive pre-demolition inspection was conducted in accordance with the Asbestos Hazard Emergency Response Act (AHERA) (40 CFR §763) to identify the type, quantity, location, and condition of RACM in the buildings [§61.145(a)] (Kominsky 2005; Smith Aug 2005)."

[3] Other reviewers commented on this recommendation. A reviewer pointed out that RACM is not going to become airborne. Another reviewer agreed that RACM is less likely to release fibers and suggested the statement be changed to say: "the RACM is less likely to release fibers to the air when the wetting…"

[4] Webber confirmed this recommendation with the panel.

[5] Two reviewers disagreed, stating that "vermiculate insulation" is really a stand-alone item and does not fit there; it is found in free form in the wall cabinets and is not a thermal system.

....with these sentences:

> "A comprehensive pre-demolition inspection was conducted in accordance with the Asbestos Hazard Emergency Response Act (AHERA) (40 CFR 763) to identify the type, quantity, location and condition of Asbestos-Containing Materials [instead of only RACM] in the buildings (61.145 (a)). Under the EPA-NESHAP 40 CFR 61.145 (a) not only RACM must be identified prior to demolition or renovation but also Category I and Category II Nonfriable Asbestos-Containing Materials."
>
> Webber clarified that the sentence, "The inspection was conducted by a State of Arkansas Department of Environmental Quality (ADEQ) licensed Asbestos Abatement Consultant" should be left in.

These recommendations are presented in Sections 2.2.3 and 2.2.3 of this report.

9.4 Fourth Reviewer

In the report, page 49, under AACM demolition and disposal, it says: "Prior to demolition of the AACM building (#3607), no asbestos-containing materials were removed." Actually, they were. TSI (Thermal System Insulation) was removed under the building. I think the intention there was to remove it before the AACM. This is said other places in the report, and worth clarifying and restating here.[6]

I think that the comments heard here are representative of what constitutes what we call the asbestos control industry consultants, contractors, and the like. We would be foolish not to always look at possible new "mouse traps" with a fair and scientific eye when they come along. However, the history of this industry suggests that, even with the best-laid plans and very professional people putting together well thought-out regulations and guidance documents, we still have an industry fraught with fraud and with people that seem to make sport of finding what they can get away to achieve a better bottom line in their business. If we are going to relax our work practices to allow additional techniques like the AACM, we need to be very careful to craft both the method itself and any other regulation-changing guidance documents, so that we know what we should expect from people when they use this method. Otherwise, we could simply create a bigger compliance problem that could affect public and worker safety, and have environmental impacts. For example, leaving visible emissions on sites could be a problem for building owners, both from a public health and liability perspective. However, overall, I think ORD should proceed with this study and examine as many things as needed to determine whether this method can be conducted in a safe and cost-effective manner.

Bringing people in to peer review this report is admirable. We all appreciate being here, but more work needs to be done in a step-by-step fashion before any rulemaking can be considered.

---

[6] Webber agreed and recommended that immediately before 4.4.2.1, the Agency add a sentence to that paragraph to this effect: "However, there was removal of TSI from the crawl spaces beneath the buildings in 1999 that appears to have left some residual ACM." This can be found in Section 2.3.3 of this report.

9.5 Fifth Reviewer

I appreciate the opportunity to interact with the EPA staff and panel members and review this document. I started out with the recognition that the comparative site had inherent limitations. Since this is a research project, I hope the points made by my colleagues do help EPA in critiquing where you are and where you might want to go in the future. It will be helpful to make available to interested parties detailed information about how you got from "point a" to "point b." For this and future related research projects, it will be very helpful to provide citations for applicable regulations, considering the variety of people who may read the reports. Hopefully, this project can set this kind of example for reports that fall under the auspices of EPA or OSHA and govern activities of people in the field.

9.6 Sixth Reviewer

When the final report comes out, we may wonder: "Did I really write that? That's incredibly comprehensive." Because we worked collaboratively from different perspectives and, through our discussions, reached agreement on so many points, people who read the workshop summary are likely going to think: "Those guys really did their homework and came up with a good product." I have been privileged to work with you. Together we accomplished a lot in the two days we had here.

9.7 EPA Closing Remarks

Wilmoth thanked the reviewers and offered appreciation for their comments. He said EPA would document its response to their input. This document would be published on EPA's website and be made publicly available after the completion of the final report. He emphasized that this is a transparent process and EPA is willing to answer any questions the reviewers may have about the Agency's response. He noted that the Agency may, at times, alter the specific language suggested by the reviewers. If so, the Agency would verify the final wording with the reviewers.

Lawrence Starfield/R6/USEPA/US
09/09/2008 03:09 PM

To Pat Gaspar/R6/USEPA/US
cc
bcc
Subject Fw: Today's Inside EPA story

Pls print
Sent by EPA Wireless E-Mail Services
Adele Cardenas

----- Original Message -----
From: Adele Cardenas
Sent: 09/09/2008 10:36 AM EDT
To: "roger wilmoth" <wilmoth.roger@epa.gov>; Erik Winchester
Cc: "steve vargo" <vargo.steve@epa.gov>; "Dr. Carl Edlund" <edlund.carl@epa.gov>; Lawrence Starfield; Richardl Greene; "David Gray" <Gray.david@epa.gov>
Subject: Fw: Today's Inside EPA story

FYI- Adele
Rob Lawrence

----- Original Message -----
From: Rob Lawrence
Sent: 09/09/2008 09:25 AM CDT
To: Myron Knudson; Adele Cardenas
Subject: Today's Inside EPA story

Daily News from InsideEPA.com - Tuesday, September 09, 2008

Critics Target EPA Research For Controversial Asbestos Disposal Method

Critics of a controversial EPA-backed method for disposing of asbestos-containing building waste without first removing the cancer-causing compound are opposing any agency research into the new method because they say the agency used an unvalidated risk assessment and faulty monitoring to outline the proposed research plan.

The critics, including state air regulators, union workers and public health activists, say that in addition to the research flaws, the method may not be cost-effective.

The opposition is just the latest setback to EPA's long-running effort to approve the new demolition method, which critics say would save time and possibly money at the expense of public health. In February, EPA dropped a proposed rulemaking to codify the practice and instead decided to focus on winning support for pursuing further research, after many of the same groups raised concerns that the method could increase public exposure to asbestos.

Now, EPA is seeking a peer review of July 21 draft studies documenting two tests of the demolition practice, known as the Alternative Asbestos Control Method (AACM). The method involves spraying a building with a chemical compound mixed with water to control asbestos fiber releases prior to and during demolition. The debris and surrounding soil is

then disposed in an approved landfill.

EPA is pursuing the method because it is much faster than the agency's current practice under the Clean Air Act's national emission standards for hazardous air pollutants (NESHAP) for asbestos demolition, which requires workers to remove and dispose of asbestos before demolition. The new method cuts demolition time by one-third to one-half, EPA says.

EPA defends the AACM approach because the agency says studies show that monitored concentrations of asbestos in the air were "orders of magnitude below any EPA existing health or performance criterion."

EPA also disputes claims that it is pursuing the new method only to save companies money, noting in one test, AACM was slightly less expensive than current practices, while in another AACM was actually more costly.

EPA has faced strong opposition to its long-running efforts to pursue other alternative asbestos-containing building demolition methods. In June, EPA dropped plans to test a "grind and burn" method, after the agency found flaws in its risk assessment. EPA also abandoned a separate effort known as the "wet" method due to unfinished scientific research efforts.

Critics continue to voice strong opposition to EPA's tests of AACM. For example, the Asbestos Disease Awareness Association (ADAA) in Aug. 18 comments says the studies use an unproven risk assessment because it is based on the assumption that very small asbestos particles are not harmful. The assessment itself was also never peer reviewed, the ADAA comments say.

According to Aug. 13 comments by the group Public Justice, EPA also used inadequate monitoring methods, which are unsupported by any studies and have been questioned by state environmental agencies.

Additionally, Public Justice warns that any method allowing more emissions than the existing NESHAP would be unlawful. "Since the Clean Air Act prohibits EPA from promulgating a revised NESHAP that is less stringent than the existing one, EPA cannot adopt the AACM without violating this provision," the comments say.

Michigan's Department of Environmental Quality's air quality division says in July 29 comments that the method could harm air quality with no economic benefit. It may cost as much to remove AACM soil and wastewater as it currently costs to remove the asbestos, the comments say.

And asbestos union workers warn in Aug. 20 comments that increased exposure is not worth the money that might be saved with an alternative method such as AACM. "Asbestos containing products have caused the largest man made public health catastrophe in our

nation's history. . . . EPA should be focusing on protection of the community and not the savings of a few dollars," the comments say.

EPA took comment on the studies until Aug. 21, and will hold a scientific peer review meeting Sept. 11 and 12.

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AACM - CoI

Lawrence Starfield/R6/USEPA/US
09/11/2008 10:51 PM

To Pat Gaspar/R6/USEPA/US
cc
bcc
Subject Fw: CPOD's Potential RA Peer Review Issue

Pls print
Sent by EPA Wireless E-Mail Services
Adele Cardenas

----- Original Message -----
From: Adele Cardenas
Sent: 09/11/2008 05:58 PM EDT
To: Lawrence Starfield
Subject: Fw: CPOD's Potential RA Peer Review Issue

FYI- for discussion tomorrow.

Adele
Jeff Marvin

----- Original Message -----
From: Jeff Marvin
Sent: 09/11/2008 03:50 PM EDT
To: Adele Cardenas; Steve Vargo
Cc: Cris Thompson; Jamie Sclafani
Subject: Fw: CPOD's Potential RA Peer Review Issue

Adele and Steve,

I am sending this as a result of Cris Thompson's conversation with you earlier this afternoon.

The contract contains several conflict of interest (COI) clauses. There is a CO added clause (written in conjunction with OGC and OAM/PTOD) entitled "Conflict of Interest Evaluation for Task Orders". This clause explains what contractors are required to ask of peer reviewers in order to determine whether or not they have conflict of interest. The other basic COI clauses are as follows: Organizational Conflicts of Interest (EPAAR 1552.209-71); Notification of Conflicts of Interest Regarding Personnel (EPAAR 1552.209-73) which requires the contractor disclose any COI during performance; and the CO added Clause "Ordering Procedures" (requires the contractor must certify they recognize a continuing obligation to identify and report any actual potential conflicts of interest arising during performance of the task order).

Below is the text of the "Conflict of Interest Evaluation for Task Orders" which contains specific information that the contractor must collect:

"CONFLICT OF INTEREST EVALUATION FOR TASK ORDERS

The contractor shall include a conflict of interest certification in all task orders in accordance with EPAAR 1552.209-71 and the Section B Clause "Ordering Procedures".

Prior to selecting expert panelists/peer reviewers, the contractor shall perform an evaluation to determine the existence of an actual or potential COI for each proposed panel member. The financial and professional information obtained by the Contractor as part of the evaluation to determine the existence of an actual or potential conflict of interest is considered private

and non-disclosable to outside entities except as required by law and/or regulation.

The contractor shall ensure that proposed peer reviewers will not have an actual or potential conflict of interest if they are selected to participate in a peer review. When determining if a proposed peer reviewer may have an actual or potential conflict of interest, the contractor shall incorporate the following yes/no questions (a.- i.) and requests for supporting information (j.-r.) into its established process to evaluate and determine the presence of an actual or potential COI:

Conflict of Interest Analysis and Certification Questions and Supporting Information

a. To the best of your knowledge and belief, is there any connection between the subject chemical or topic and any of your and/or your spouse's compensated or uncompensated employment, including government service, during the past 24 months? Yes ___No ___

b. To the best of your knowledge and belief, is there any connection between the subject chemical or topic and any of your and/or your spouse's research support and project funding, including from any government, during the past 24 months? Yes ___No ___

c. To the best of your knowledge and belief, is there any connection between the subject chemical or topic and any consulting by you and/or your spouse, during the past 24 months?
Yes ___No ___

d. To the best of your knowledge and belief, is there any connection between the subject chemical or topic and any expert witness activity by you and/or your spouse, during the past 24 months? Yes ___No ___

e. To the best of your knowledge and belief, have you, your spouse, or dependent child, held in the past 24 months, any financial holdings (excluding well-diversified mutual funds and holdings, with a value less than $15,000) with any connection to the subject chemical or topic?
Yes ___No ___

f. Have you made any public statements or taken positions on or closely related to the subject chemical or topic under review? Yes ___No ___

g. Have you had previous involvement with the development of the document (or review materials) you have been asked to review? Yes ___No ___

h. To the best of your knowledge and belief, is there any other information that might reasonably raise a question about an actual or potential personal conflict of interest or bias? Yes ___No ___

i. To the best of your knowledge and belief, is there any financial benefit that might be gained by you or your spouse as a result of the outcome of this review? Yes ___No ___

j. Compensated and non-compensated employment (for panel member and spouse): list sources of compensated and uncompensated employment, including government service, for the preceding two years, including a brief description of work.

k. Research Funding (for panel member): list sources of research support and project funding, including from any government, for the preceding two years

for which the panel member served as the Principal Investigator, Significant Collaborator, Project Manager or Director. For panel member's spouse, provide a general description of research and project activities in the preceding two years.

l. Consulting (for panel member): compensated consulting activities during the preceding two years, including names of clients if compensation provided 15% or more of annual compensation. For panel member's spouse, provide a general description of consulting activities for the preceding two years.

m. Expert witness activities (for panel member): list sources of compensated expert witness activities and a brief description of each issue and testimony. For panel member's spouse, provide a general description of expert testimony provided in the preceding 2 years.

n. Assets: Stocks, Bonds, Real Estate, Business, Patents, Trademarks, and Royalties (for panel member, spouse and dependent children): specific financial holdings that collectively had a fair market value greater than $15,000 at any time during the preceding 24-month period (excluding well-diversified mutual funds, money market funds, treasury bonds and personal residence).

o. Liabilities (for panel member, spouse and dependent children): liabilities over $10,000 owed at any time in the preceding twelve months (excluding a mortgage on personal residence, home equity loans, automobile and consumer loans).

p. Public Statements: A brief description of public statement and/or positions on or closely related to the matter under review by the panel member.

q. Involvement with document under review: A brief description of any previous involvement of the panel member in the development of the document (or review materials) the individual has been asked to review.

r. Other potentially relevant information: A brief description of any other information that might reasonably raise a question about actual or potential personal conflict of interest or bias.

(Note: The requests for supporting information (j.-r.) are for task orders involving public peer review meetings)

The OMB clearance number for the collection of Conflict of Interest Information under this contract is 2030-0023 with an expiration date of May 31, 2011."

The task order contains language (and is included in most task orders) as stated: "All peer reviewers must have no vested interest in the outcomes of such a review and shall have no conflict of interest with EPA on pending scientific issues or legal proceedings pertaining to this review." So when the contractor informs the Task Order Project Officer of the proposed peer reviewers, at that point, the contractor has already established that to the best of their belief, the peer reviewer has no COI. The ultimate responsibility of selecting the peer reviewers is with the contractor. Also, as stated in the contract PWS, when conducting peer reviews, the contractor shall follow EPA's Science Policy Council Peer Review Handbook

Cris also asked me to tell you she has discussed this issue with her superiors at OAM and they are evaluating. If I can be of further assistance please call me. Thanks.

Jeff Marvin
Manager, OAR, OARM, ORD Service Center
U.S. Environmental Protection Agency
Office of Acquisition Management
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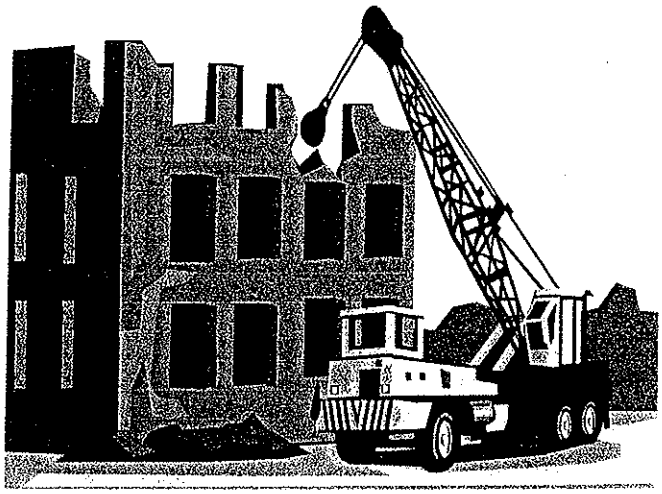


A Layman's Perspective

The EPA Asbestos NESHAP

40 CFR 61, Subpart M

2008 Fall Technical Seminar

Friday, November 7, 2008
Sheraton Nashville Downtown

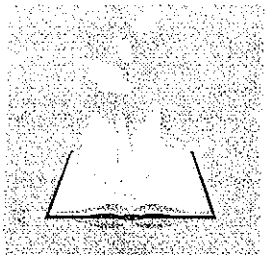
A Layman's Perspective

The EPA Asbestos NESHAP
40 CFR 61, Subpart M

Agenda

1. A look at the regulation
2. A review of the main regulatory points
3. The pro-active concept of regulations
4. The reason for the NESHAP
5. The remaining problem
6. A solution considered

A LOOK AT THE REGULATION



A FOCUS ON DEMOLITION AND RENOVATION

Federal NESHAP

↓

Asbestos NESHAP

↓

Demolition and Renovation

↓

61.141, 61.145, 61.150

↓

Reduce each section to demolition and renovation

↓

THE NASHVILLE NESHAP

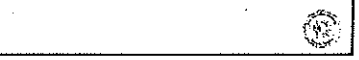
Each of the "sections" (.141, .145, .150) of the Asbestos NESHAP for renovation and demolition is a "regulation" promulgated under the Clean Air Act.

Logically, as well as numerically, the flow of the law is:

1. Terms are defined by which the regulations are applied.
   - 40 CFR 61.141 (Definitions)
2. The work that generates asbestos emissions is regulated.
   - 40 CFR 61.145 (Demolition and Renovation)
3. The resulting waste stream is regulated through disposal.
   - 40 CFR 61.150 (Waste Disposal)

Go to the regulation with me, and step through some of the important issues.

Highlight, margin notes



U.S. EPA
40 CFR 61 Subpart M
National Emission Standard for Hazardous Air Pollutants
The Asbestos NESHAP
(Nashville version)

This copy of the federal Asbestos NESHAP has deleted references to 61.142 Asbestos Mills, .143 Roadways, .144 Manufacturing, .146 Spraying, .147 Fabricating, .148 Insulating Materials, .149 Waste Disposal for Asbestos Mills, .151 Inactive Waste Sites, .154 Waste Disposal for Asbestos Mills, .191 Inactive Waste Sites, .192 Air Cleaning, .193 Reporting, .194 Active Waste Disposal Sites, .195 Operations that convert ACWM into non-asbestos materials, 196 Cross reference to other asbestos regulations, Appendix A Spot removal operations.
This copy has retained only references to 61.145 Demolition and Renovation and 61.150 Waste disposal.

Authority: 42 U.S.C. 7401, 7412, 7414, 7416, 7601
Source: 49 FR 13661, Apr. 5, 1984, unless otherwise noted.

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Notice the regulatory flow

- 145 before 150.
- Does the regulation apply? [145(a)]
  - Thorough inspection
- If it applies, notify [145(b)]
- Then follow the procedures [145(c)]
  - Generate the waste
- Then the waste is addressed [150]
  - No visible emissions, etc.
- It is not that we can ignore everything else, as long as we don't have visible emissions.

A REVIEW OF THE MAIN POINTS OF THE ASBESTOS NESHAP

NESHAP APPLICABILITY

DEMOLITION	INSPECTION	RENOVATION
•NOTIFICATION		•NOTIFICATION
•REQUIRED REMOVAL		•REQUIRED REMOVAL
•WET METHODS		•WET METHODS
•TRAINED PERSON		•TRAINED PERSON
•LEAK-TIGHT WASTE		•LEAK-TIGHT WASTE
•LABELING		•LABELING
•PROPER DISPOSAL		•PROPER DISPOSAL
RACM: 260 Linear Ft. 160 Square Ft. 35 Cubic Ft.		
DEMO NOTIFICATION (even with no asbestos)		NO REGULATION

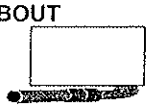
NESHAP FACILITIES

ALL STRUCTURES, INSTALLATIONS, OR BUILDINGS, EXCEPT SINGLE RESIDENTIAL THROUGH 4 UNITS.



INCLUDES SHIPS, WASTE SITES, PIPELINES, AND JUST ABOUT EVERYTHING ELSE

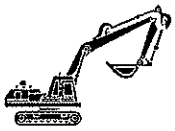




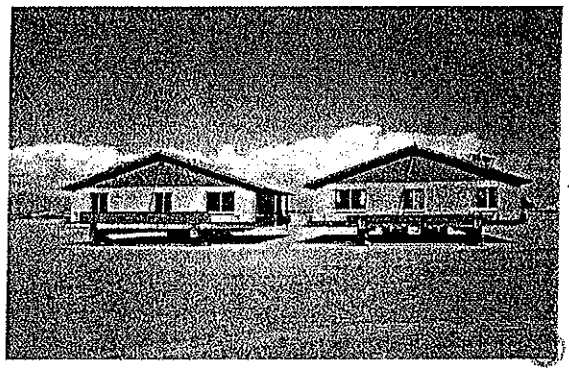
REGULATED ACTIVITIES

DEMOLITION OR RENOVATION
IMPACTING OR CAUSING REGULATED ASBESTOS CONTAINING MATERIAL

→ (RACM) ←



Is this a regulated activity?



REGULATED ASBESTOS CONTAINING MATERIAL

- FRIABLE ACM
- CATEGORY I NON-FRIABLE WHICH **HAS BECOME FRIABLE**
- CATEGORY I NON-FRIABLE WHICH HAS BEEN/WILL BE SANDED, GROUND, CUT OR ABRADED
- CATEGORY II NON-FRIABLE WHICH PROBABLY **WILL BECOME/HAS BECOME FRIABLE**
- Or, EPA has ruled the material RACM aside from friability

NON-FRIABLE ACM CATEGORIES

CATEGORY I NON-FRIABLE

RESILIENT/PLIABLE ASPHALTIC ROOFING, VINYL FLOORING, PACKINGS, AND GASKETS, *IN GOOD CONDITION*

CATEGORY II NON-FRIABLE

ALLTHE OTHER NON-FRIABLE MATERIALS *IN GOOD CONDITION*

REGULATED COMMUNITY

WASTE GENERATOR:

THE OWNER/OPERATOR OF A FACILITY PRODUCING ASBESTOS CONTAINING WASTE MATERIAL (ACWM)

(It's the building owner and the contractor)

FRIABLE vs NON-FRIABLE

ALL ACM:

FRIABLE	NON-FRIABLE
(RACM)	(Cat. I & Cat. II)

RACM : FULLY REGULATED

CAT I : GENERALLY NOT REGULATED

CAT II : NON-FRIABLE WASTE NOT REGULATED

NESHAP Thresholds of RACM or ACWM

260 LINEAR FEET ON PIPE

160 SQUARE FEET ON ALL OTHER SURFACES

35 CUBIC FEET IF UNABLE TO MEASURE OTHERWISE (i.e. waste pile or debris)

Application of threshold amounts:

RENOVATION BELOW THRESHOLD:
NO REGULATION

DEMOLITION BELOW THRESHOLD:
DEMO NOTIFICATION – No ACM controls

61.145 DEMOLITION & RENOVATION:

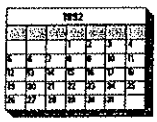
(a): Applicability

- ❑ Thorough inspection
  - Identify all ACM
  - Don't miss anything
  - Categorize by NESHAP standards
  - Quantify by NESHAP standards
- ❑ Make applicability by threshold amounts of RACM

61.145 DEMOLITION & RENOVATION:

(b): Notification

(1) Delivery
(2) Update as necessary
(3) 10 working days
  - Changes to start date
(4) Elements of the notification
(5) Use the notification form



The 5 levels of notification

1. Demolition
   - 10 day notice
2. Ordered Demolition
   - notice, but no 10 day period
3. Renovation
   - 10 day notice
4. Emergency Renovation
   - notice, but no 10 day period
5. Annual Notification
   - 10 day notice

61.145 DEMOLITION & RENOVATION:

(c): PROCEDURES FOR EMISSION CONTROL

(1) Remove RACM before disturbance
(2) Component removal intact
(3) Stripping of RACM in place
(4) Stripping from removed component
(5) Disposing of intact component
(6) Rules for removal of RACM
(7) Freezing temperatures/dry removal
(8) AHERA Contractor/Supervisor
(9) Wetting for ordered demo
(10) Removal for intentional burning

61.150 WASTE DISPOSAL:

(a) No visible emissions
   - Adequately wet
   - Leak-tight containers
   - Label containers
   - Cat. I and Cat. II exemptions

(b) Disposal at approved site ASAP
   - Cat. I exemption (and Cat. II)

(c) Mark waste vehicles loading & unloading

(d) Waste Shipment Record for transport off generator site

(e) WSR available upon request

WASTE CONTAINER LABELS:

OSHA:

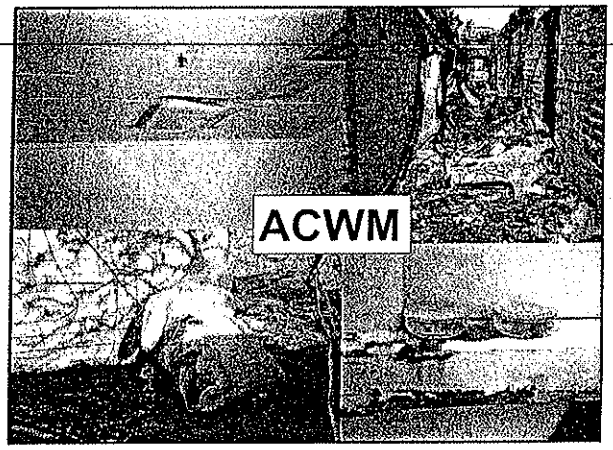
DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER & LUNG DISEASE HAZARD

EPA:

GENERATOR NAME
SITE ADDRESS

DOT:

RQ ASBESTOS
NA 2212



Proper Disposal of Waste

Every load of ACWM that leaves the site must have a Waste Shipment Record (WSR).

Detail information on:
- -Work site location
- -Owner
- -Operator
- -Waste disposal site
- -NESHAP jurisdiction(s)
- -Description and amount of materials
- -Signed by operator (retain copy)
- -Signed by transporter (retain copy)
- -Signed by WDS (retain copy)

Copies must be maintained for at least 2 years

Proper Disposal of Waste

- ACWM must be disposed of only at a site permitted by the NESHAP authority
- The waste must be covered by the WDS with at least 6" of non-asbestos fill daily
- No visible emissions
- 3-dimensional location records must be kept
- Original WSR returned to operator within 35 days

THE PRO-ACTIVE CONCEPT OF REGULATIONS

Compare OSHA

- "no exposure, and I'm home free"
  - Is that right? (no)
- "Can I get cited for exceeding the PEL?"
  - no
  - You get cited for not doing the requirements that would keep the PEL from being exceeded.

OSHA is pro-active

- Requires safeguards that will keep the employer from exceeding the PEL.
  - Competent Person
  - Negative Exposure Assessment
  - Regulated Area
  - Primary Controls
  - Prohibitions
  - Communication of Hazards

All these are required without any exposure.

Pro-active NESHAP

- Main safeguard – removal before disturbance
- Not meant to be related to air monitoring
- It is triggered by the visible presence of RACM.
- Like the OSHA reg: "You get cited for not doing the requirements that would keep the PEL (emissions) from happening".

UNDERSTAND THE REASON FOR THE REGULATION

The reason for the NESHAP

- Buildings contain asbestos
- Demolition and Renovation happens
- Release to the ambient air
- The public and the environment

Still used today in industry and construction

The reason for the NESHAP

- The purpose of the NESHAP, under the Clean Air Act, is to protect the public and the environment from further elevated asbestos contamination in the ambient air.
- These ambient air levels vary in areas or cities in this country, depending on activities that cause the airborne contamination.

The reason for the NESHAP

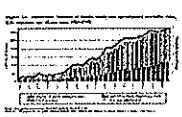
- For well over 100 years, the United States has imported, produced and consumed huge amounts of asbestos, as much as 800,000 tons per year in it's heyday.
- Most of this asbestos was used in building materials.
- Most of the asbestos is still in buildings.

The reason for the NESHAP

- Activities that cause asbestos to be released into the ambient air:
  - Uncontrolled demolition and renovation of buildings containing asbestos
  - Disturbance of soils with naturally occurring asbestos

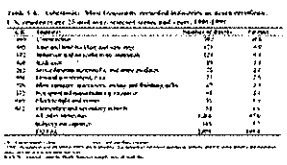
The reason for the NESHAP

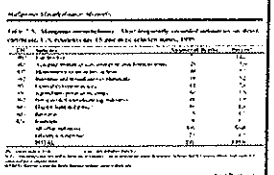
- The need for the NESHAP is to address a basic source of the very real health effects from exposure to asbestos.
- Death due to mesothelioma and asbestosis is increasing at an alarming rate in the U.S.



The reason for the NESHAP

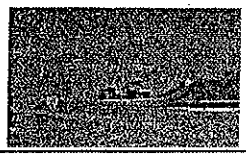
- The individuals who make up the early mortality data are mostly from the construction industry.





The reason for the NESHAP

- But, it's not just occupational exposure that causes this death toll.
- It is occupational exposure on top of the already existing ambient exposure that the public has been breathing all it's life.



The reason for the NESHAP

- Since we should know that not all building owners and contractors know or care about the preceding data, pro-active regulatory controls are needed to address the building demolition and renovation activities as a principal source of ambient air asbestos.

The reason for the NESHAP

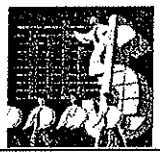
- Pro-active Controls:
- Required prior removal, with controls, of asbestos containing material that may become fiber emitting during demolition or renovation.
- Controlled disposal of ACWM.
- The current NESHAP is Pro-active.

The reason for the NESHAP

- Pro-active is better than re-active.
- Exposure, once released, cannot be taken back.
- Not all contractors and owners can, will or even want to comply with the details of the AACM.
- The AACM demonstration, as I understand it, is re-active.

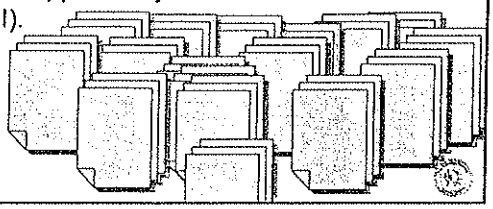
Comments on the NESHAP

- I believe that if a municipality cannot afford NESHAP compliance, they will never be able to afford AACM compliance.



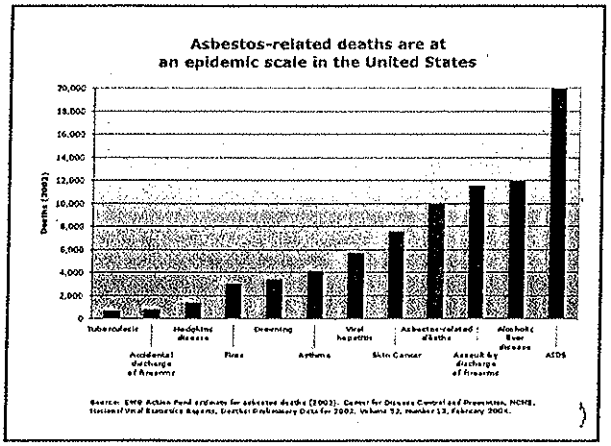
Comments on the NESHAP

- If the AACM is to be sanctioned, it appears that new rulemaking would be needed.
- New rulemaking would be much preferable to the Applicability Determination Index (ADI).



The Importance of Mesothelioma

- Great Britain research
- "The number one cause of occupational death in the country."
- "More people die of mesothelioma every year than die in automobile accidents."



BUT, THE PROBLEM OF THE CITIES REMAINS

A Real Problem in the U.S.

One that Project Designers should address

EPA's Look At The AACM

- All of you are familiar with the above concept, now abandoned (?) by EPA.
- It was not EPA's attempt to put the abatement contractor out of business, nor to do away with the NESHAP regulation.
- It was EPA's attempt to address a problem that you (we) should have been addressing all along.

As EPA Explained early on.....

- Asbestos removal before demolition is very expensive, compared to normal demolition.
- Cities are faced with assuming control of buildings and then having to demolish them.
- The problem of abandoned buildings is skyrocketing.

City Problem

- Asbestos-containing structures are in low income areas.
- Property values don't justify cost of demolition.
- The property owners default on taxes.
- City assumes control of property and liability for demolition.
- City can't afford traditional NESHAP costs, so buildings deteriorate.

What Happens?

- Buildings can become crime and drug centers, blight on neighborhoods, and pose significant risk to health and welfare of the adjacent society.
- Buildings may deteriorate until they are structurally unsound; then under imminent danger of collapse conditions they are demolished traditionally.

Examples

- City of Fort Worth
  - 443 Abandoned buildings that cannot be demolished because of cost of asbestos removal (2005)
- City of Baltimore
  - 15,000 abandoned buildings (asbestos unknown)
- City of Detroit
  - Projected 1300 demolitions but could only afford 684 in FY2003; down from 2500 in FY 2001; NESHAP regulations increased cost by one third; 12,000 abandoned homes
- City of Philadelphia
  - 25,000 abandoned buildings, asbestos unknown

Examples (continued)

- City of Cincinnati
  - "About 50% of the demolitions are done at night or on weekends when no inspectors are around" (personal communication)
- City of Fordyce, Arkansas
  - 130 Buildings and the Mayor is irate
- Saint Louis Airport
  - According to Airport attorneys in 2003, removal of ACM prior to demolition will increase demolition time for remaining facilities with RACM from 8 hours per facility to forty hours per facility and will increase cost from $7000 per facility to $30,000 per facility -- for residential structures
- Edwards Air Force Base
  - Raised cost of demolition of houses by a factor of 2

If not AACM, then What?

- Do you want to solve the problem, or do you want EPA to do it for you?

A SOLUTION?

The answer is NOT to do away with the Clean Air Act regulations (NESHAP), or to choose to be in non-compliance with federal and state laws.

I believe that the answer is to look beyond our 30 year old traditional methods of compliance, and come up with better, faster, cleaner, safer, less expensive ways *to remove RACM before demolition.*

As an example, at one point in our history we overcame the need to perform Class I removal only in unoccupied buildings, and today, we meet owners needs by removing Class I materials safely and without liability in occupied buildings that remain in use during the removal.

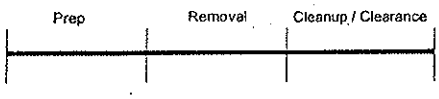
At one time, it was thought that removal of friable material had to produce very high fiber count in the air.

Now, we expect to remove friable material and never exceed clearance throughout the entire job.

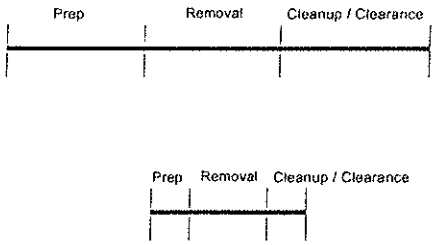
Our industry has made progress in many areas, and now it is time to take the next step…..

You need to come up with a way to remove the RACM from those hundreds of thousands of abandoned buildings, safely, cleanly, in compliance, making a fair profit and *cut the cost in half or less.*

Historically, a specified "Response Action" would have the following outline of "phases" of work:



It appears to me that we need to cut most of the prep cost, some of the removal cost, and most of the cleanup cost.



Regulatory Compliance

- OSHA's intent is to avoid any asbestos exposure to employees.
- EPA's intent is to avoid any release to the ambient air.

The NESHAP must still be complied with.
OSHA must still be complied with.

You project designers can work this out.

Don't be hung up on tradition.

Be willing to listen, look at and come up with new concepts.

We're talking about removal of RACM for demolition:

Given the current high price of poly and labor, can you cut most of that out?

Can you do Class I work without multiple layers of poly on the walls and floor of an abatement area?

Can you do without the containment all together?

Can a removal encapsulant sufficiently contain fiber release?

What if we could demonstrate that it can?

What if our containment was only an OSHA NPE?

How about the use of air scrubbers instead of a NPE?

What if you could offer to remove RACM for half the average price that the industry bids, and do it better, safer, cleaner and in less time, and still make a good profit?

I think that many owners would jump at it.

I think that many city jobs would go forward.

I think it would be less expensive than AACM.

("I think" is not worth much, but that's what I think)

It should be us - our industry - that comes up with the solutions to the cities problems.

We should present the solution to the owners and EPA, not the other way around.

The AACM could never work under the current regulations.

RACM must be removed before demolition!

We have a billion dollar industry within our grasp.

The contractors can do it.

The Project designers must make it happen.

Questions/Comments

Bill Cavness
Director, The Asbestos Institute
Chair, Asbestos Committee EIA
Past VP National EIA
Past President, AZ Chapter EIA
AZ OSHA Advisory Committee
602-864-6564 bill@taiinfo.com

Lawrence Starfield/R6/USEPA/US
06/30/2008 04:01 PM

To Pat Gaspar/R6/USEPA/US
cc
bcc
Subject Fw: Engaging NEJAC on Alternative Asbestos Control Method Issue

Pls print
Sent by EPA Wireless E-Mail Services
Charles Lee
----- Original Message -----

From: Charles Lee
Sent: 06/30/2008 04:50 PM EDT
To: Granta Nakayama
Cc: Catherine McCabe; Lynn Buhl; Margaret Schneider; Lawrence Starfield; Heather Case; Kent Benjamin; Marla Hendriksson; Richard Albores; Joe Edgell; Victoria Robinson
Subject: Engaging NEJAC on Alternative Asbestos Control Method Issue

Grant

At the last Program Progress Review Meeting with Marcus Peacock, Marcus asked OEJ to provide recommendations regarding whether or not EPA should engage the NEJAC on the Alterative Asbestos Control Method (AACM). I have discussed this issue in detail with both Larry Starfield and Richard Moore. Richard is the NEJAC Chair. For the following reasons, both are in agreement with OEJ that EPA should not engage the NEJAC on this issue:

- Region 6 is pursuing an ongoing outreach effort to key stakeholders on the AACM and EPA progress, including Richard Moore. Given the complexity of the AACM issues and their highly volatile and polarized nature, we all agree that this is the most effective course of action.
- Given the nature of the issue, asking the NEJAC to provide advice will likely create a platform for public posturing on the part of outside interest groups, rather than the more low-key venue needed for thoughtful dialogue. This could seriously damage the NEJAC's public credibility and ability to function as a consensus body.

Since the last Program Progress Review Meeting, Mayor Greene had communicated with Marcus on this issue, and conveyed the above position. If you need any more information regarding this issue, please do not hesitate to contact me.

Charles

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Charles Lee
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Office of Environmental Justice
U.S. Environmental Protection Agency
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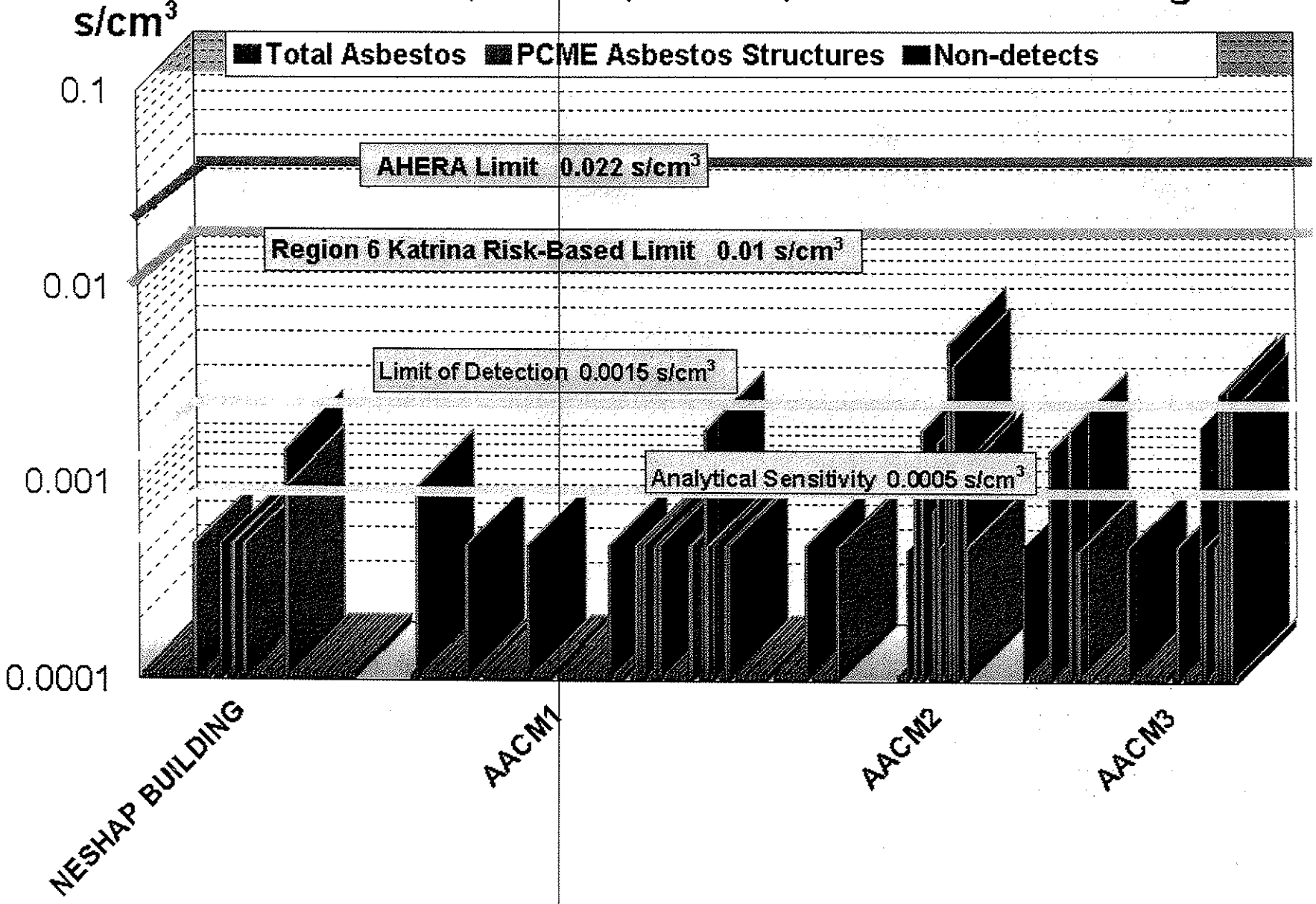
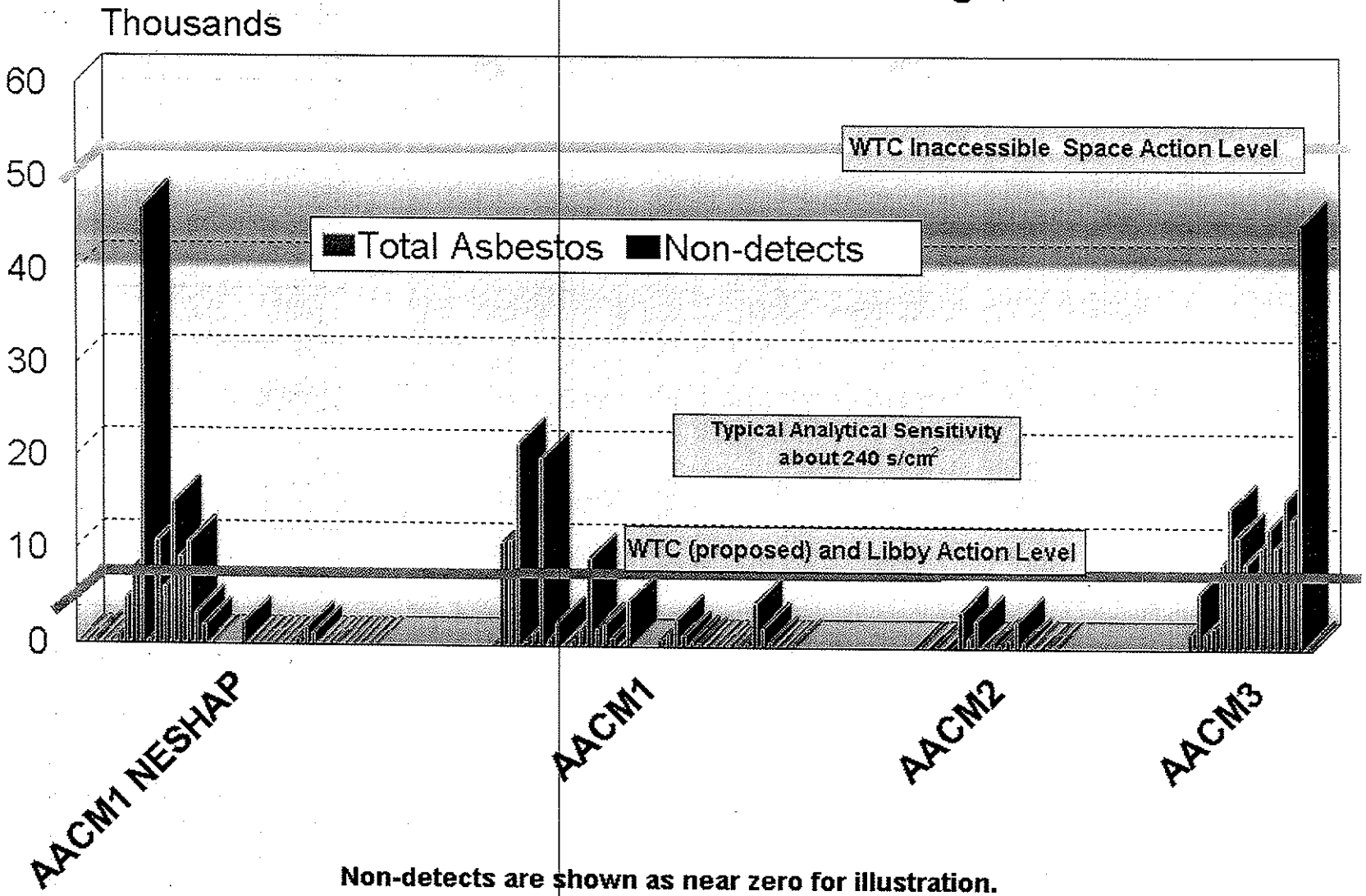
Airborne Asbestos Concentrations (TEM) During Demolition of AACM1 NESHAP, AACM1, AACM2, and AACM3 Buildings



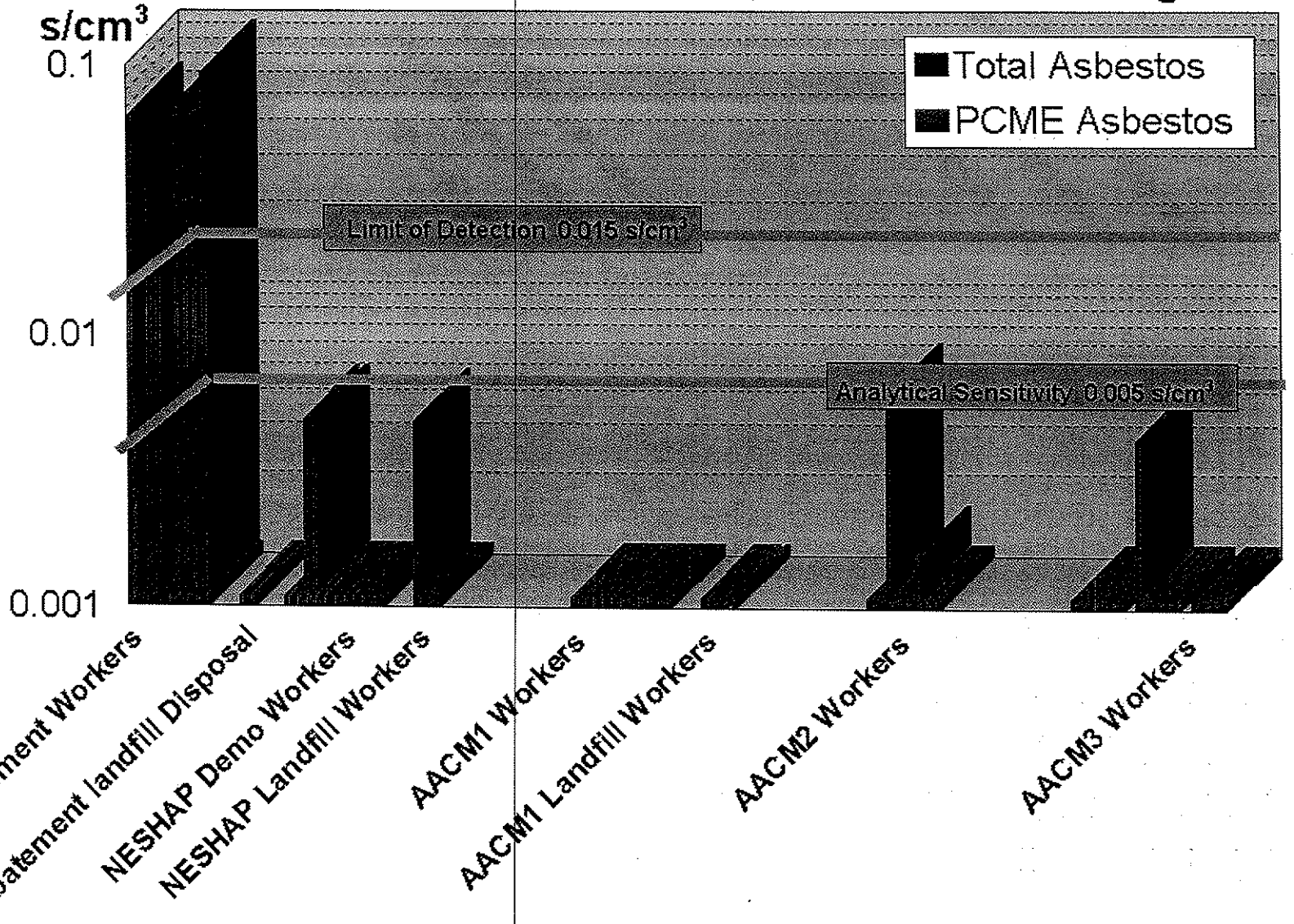
Non-detects are shown as near zero for illustration.

Dust Asbestos Loadings (TEM) During Demolition of AACM1 NESHAP, AACM1, AACM2, and AACM3 Buildings, s/cm^2



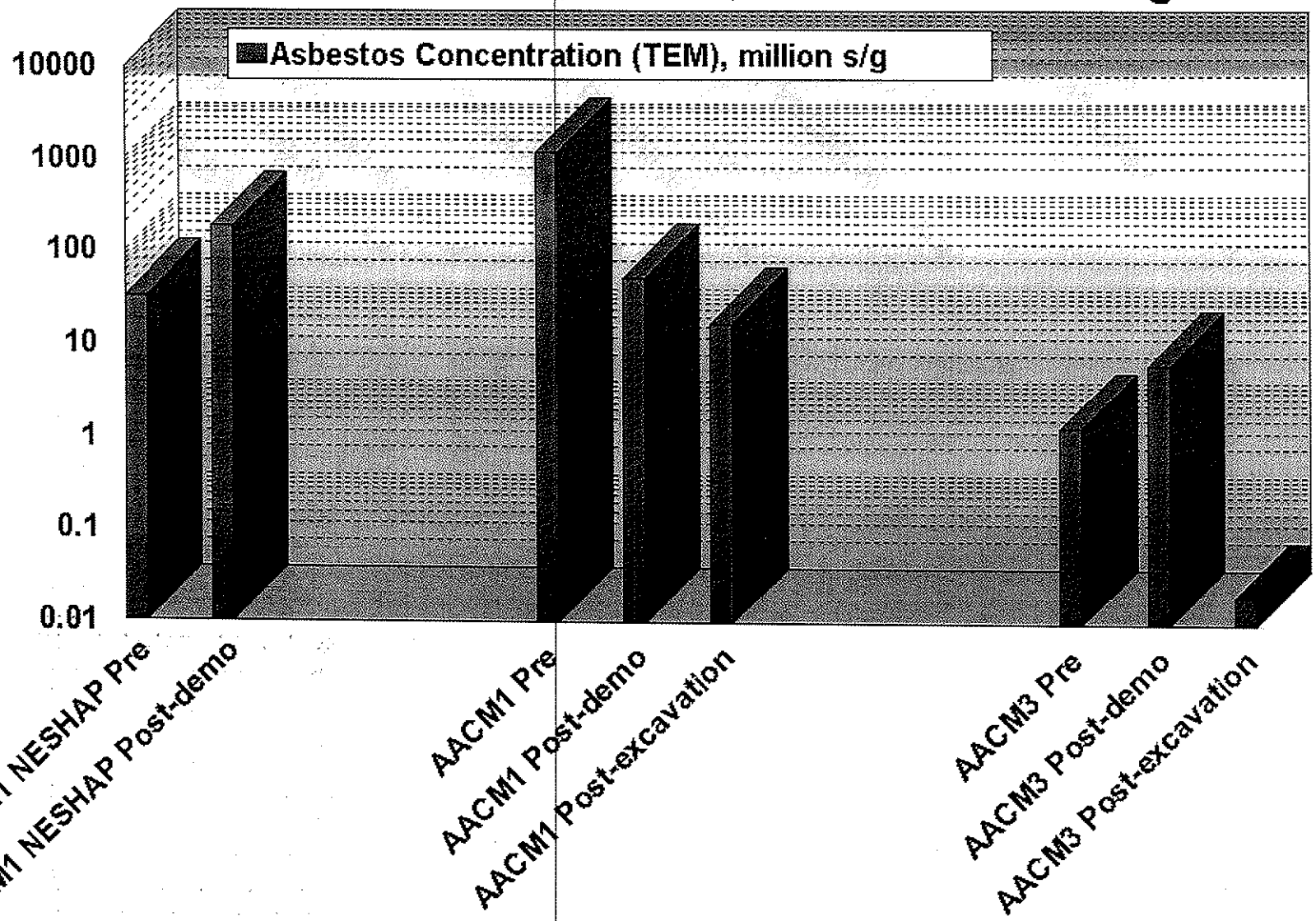
Non-detects are shown as near zero for illustration.

Worker Breathing Zone Asbestos Concentrations (TEM) During Demolition of AACM1 NESHAP, AACM1, AACM2, and AACM3 Buildings

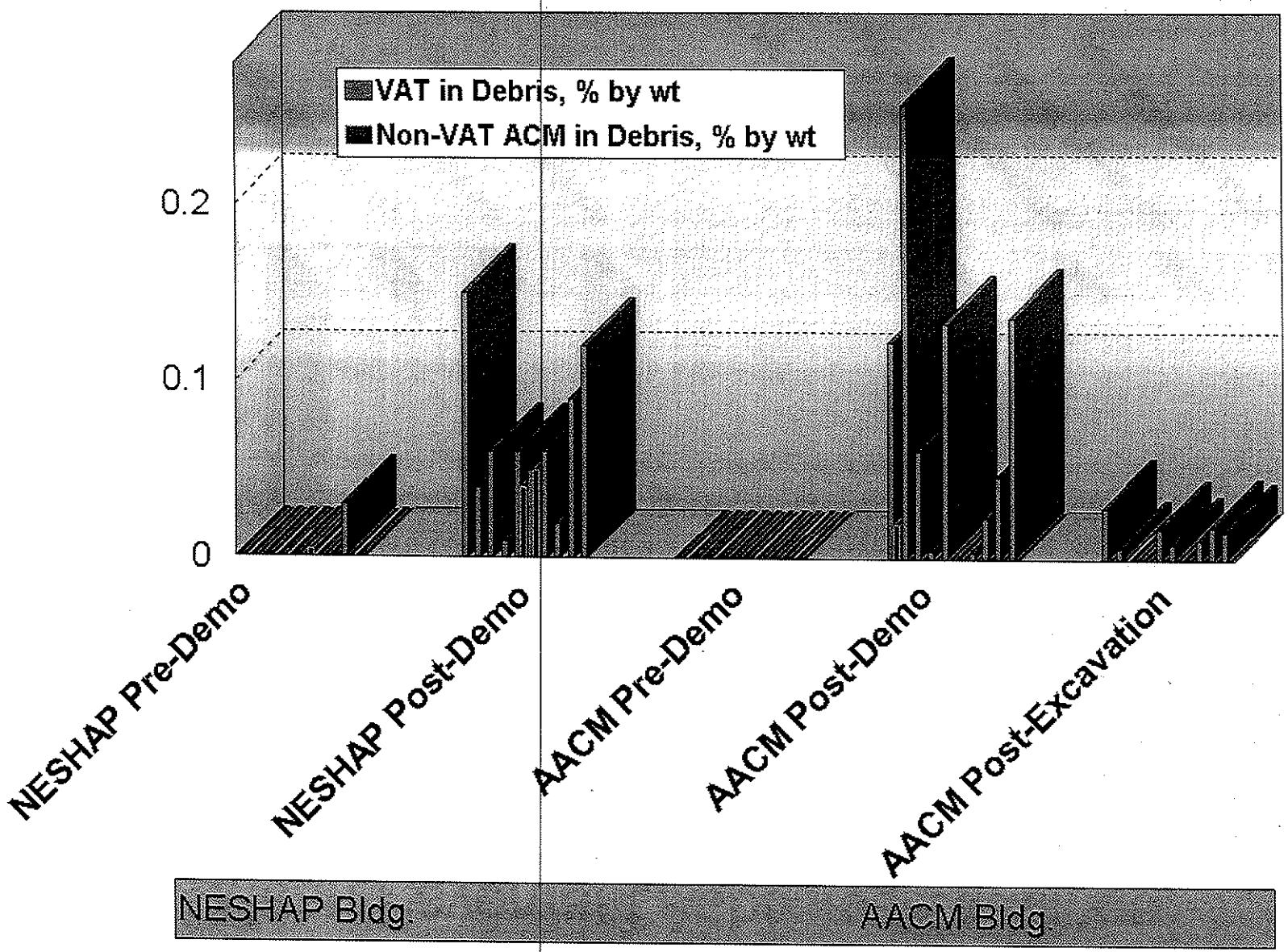


Non-detects are shown as near zero for illustration.

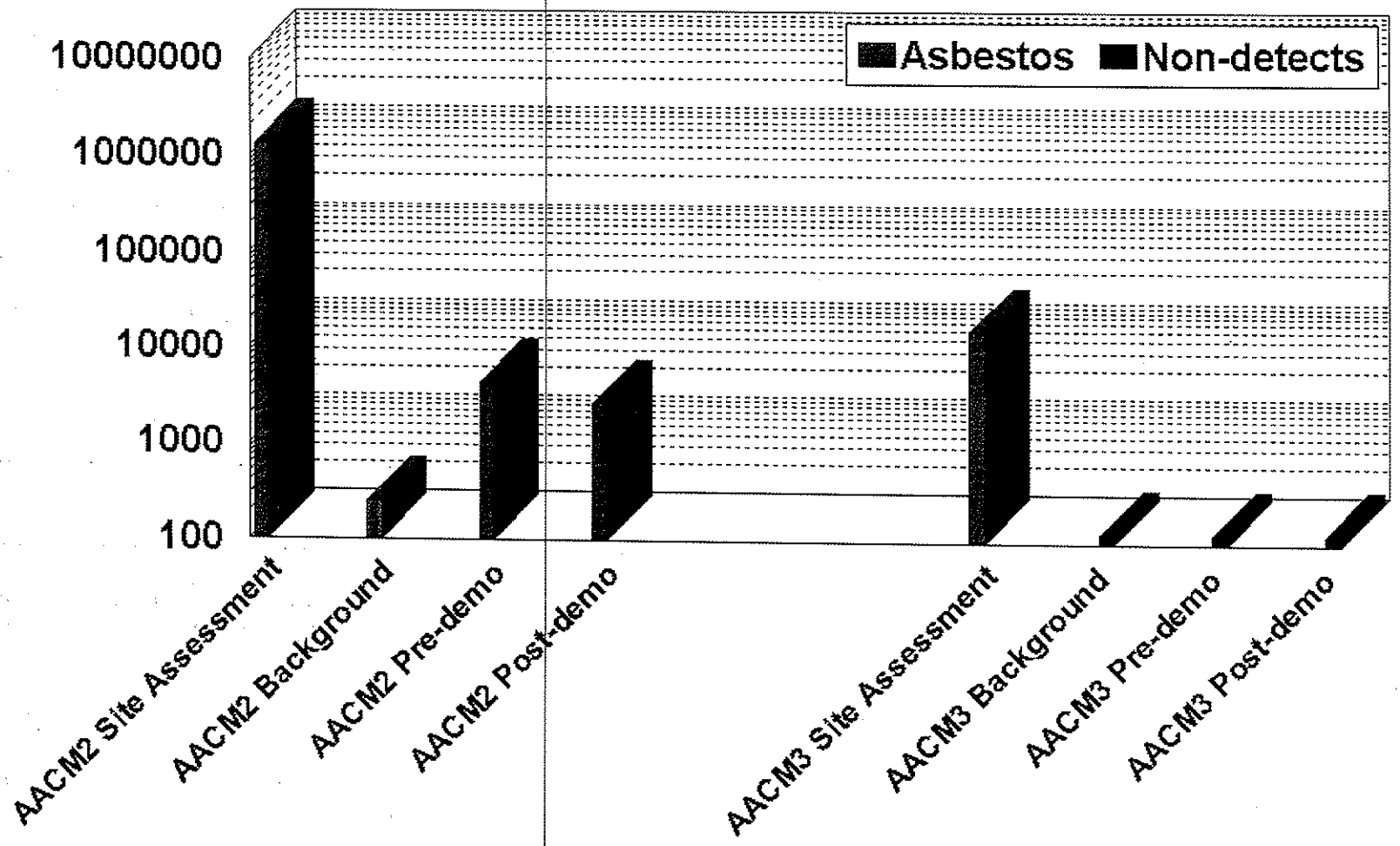
Mean Soil Asbestos Concentrations (TEM) During Demolition of AACM1 NESHAP, AACM1, and AACM3 Buildings



Vinyl Asbestos Tile Debris in Soil During Demolition of AACM1 NESHAP and AACM1 Buildings at Fort Chaffee



Mean Pavement Asbestos Loadings During AACM2 and AACM3, s/cm^2



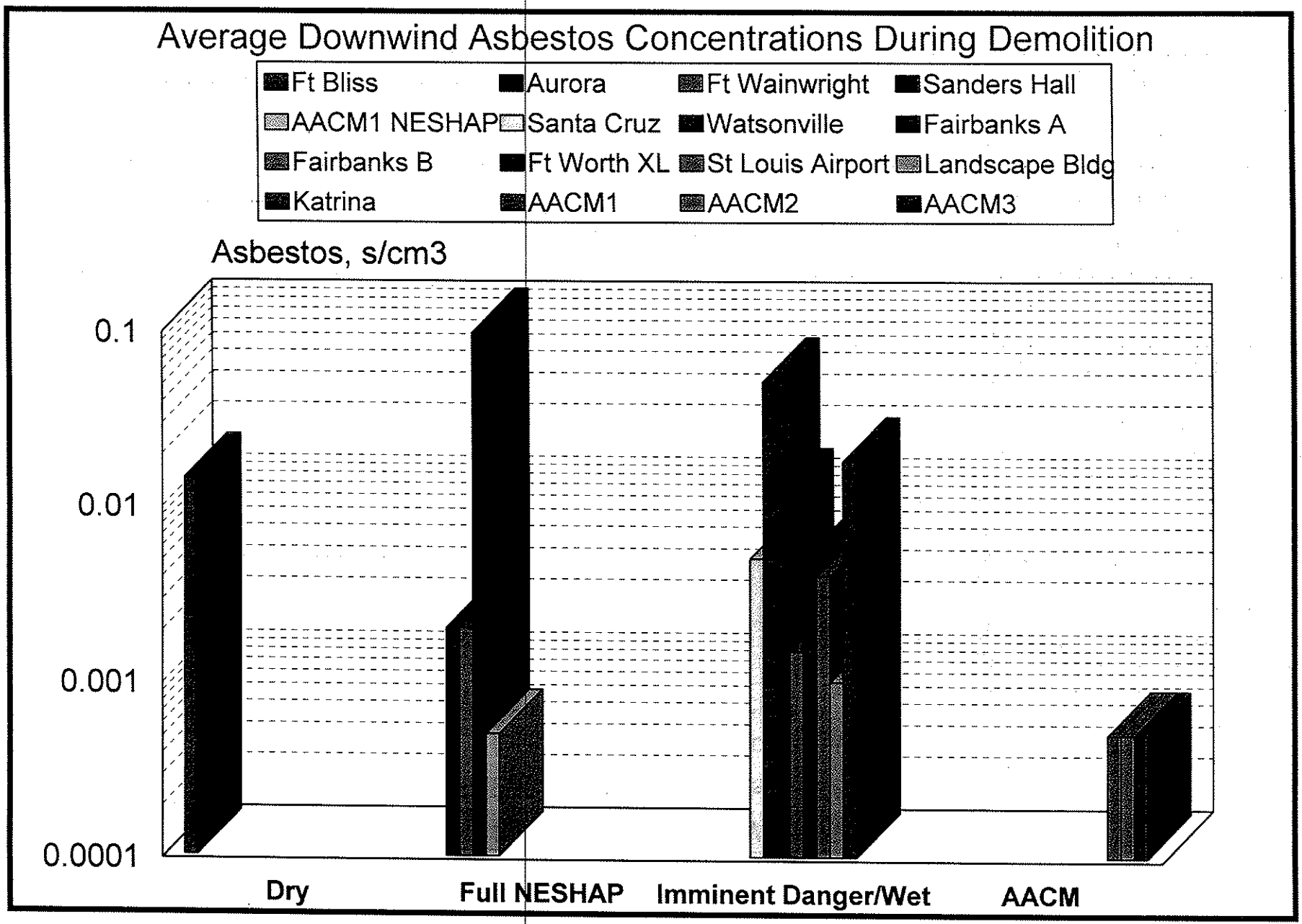
Non-detects are shown as near zero for illustration.

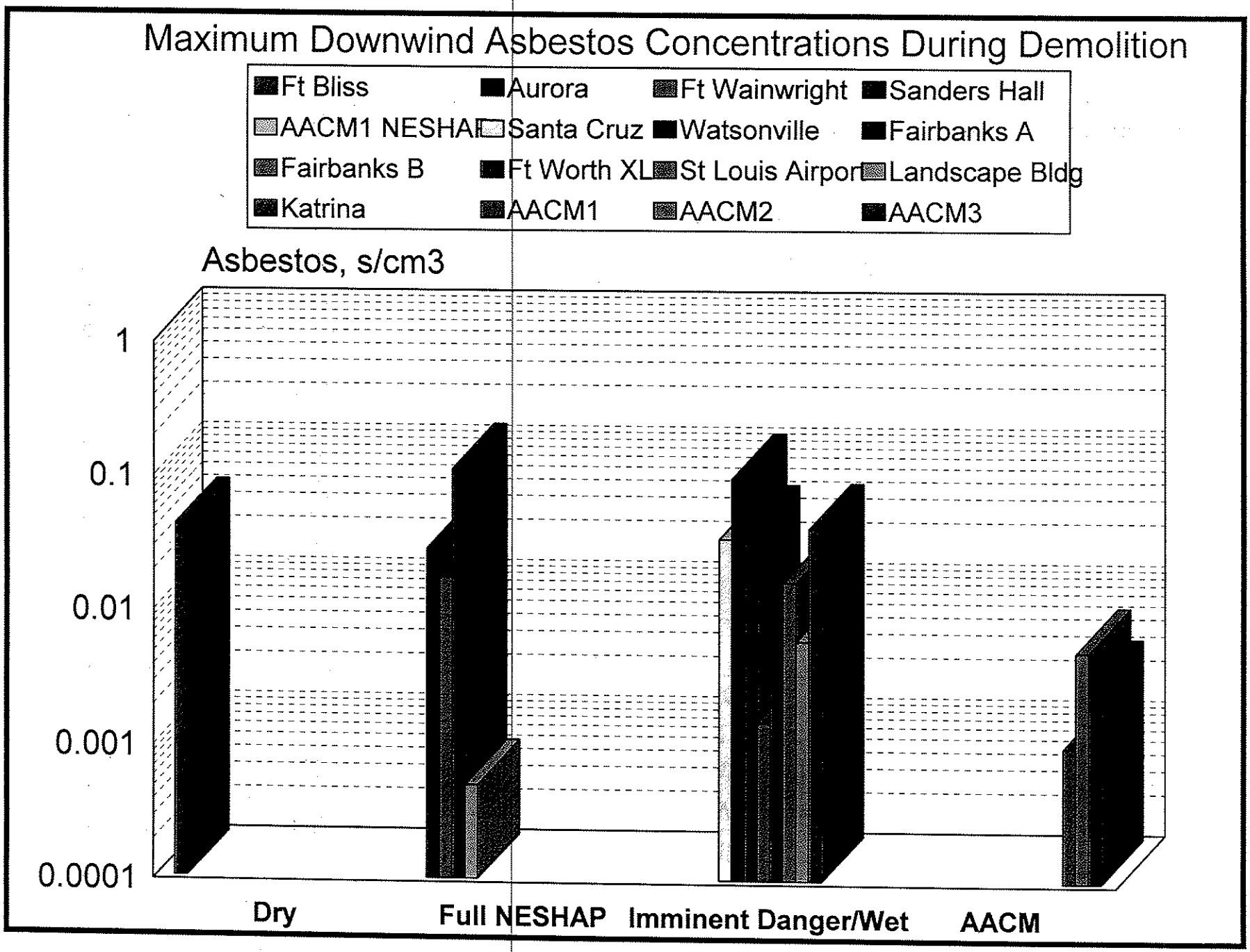
Cost Summaries from the AACM building demolitions

Site	Cost		
	$/ft² of building footprint	$/ft² of RACM	Cost Comparison of NESHAP vs AACM
AACM1			
NESHAP (Actual)	$24.07	$5.23	
AACM1	$12.86	$2.80	
AACM2			
NESHAP (Estimated)	$16.02	$11.80	
AACM2	$15.54	$10.01	
AACM3			
NESHAP (Estimated)	$14.69	$4.00	
AACM3	$16.46	$4.48	

Time Summaries from the AACM building demolitions

Site	Time, days	Comparison of NESHAP vs AACM
	AACM1	
NESHAP (Actual)	10	
AACM1	1.5	
	AACM2	
NESHAP (Estimated)	3	
AACM2	2	
	AACM3	
NESHAP (Estimated)	6	
AACM3	3.5	


Average Downwind Asbestos Concentrations During Demolition
Ft Bliss
Aurora
Ft Wainwright
Sanders Hall
AACM1 NESHAP
Santa Cruz
Watsonville
Fairbanks A
Fairbanks B
Ft Worth XL
St Louis Airport
Landscape Bldg
Katrina
AACM1
AACM2
AACM3
Asbestos, s/cm3
0.1
0.01
0.001
0.0001
Dry
Full NESHAP
Imminent Danger/Wet
AACM


Maximum Downwind Asbestos Concentrations During Demolition
Ft Bliss
Aurora
Ft Wainwright
Sanders Hall
AACM1 NESHAP
Santa Cruz
Watsonville
Fairbanks A
Fairbanks B
Ft Worth XL
St Louis Airport
Landscape Bldg
Katrina
AACM1
AACM2
AACM3
Asbestos, s/cm3
1
0.1
0.01
0.001
0.0001
Dry
Full NESHAP
Imminent Danger/Wet
AACM

COMPARISON OF ASBESTOS CONCENTRATIONS FROM DEMOLITIONS

2006

SITE	NESHAP?	Asbestos Concentration		Comments
		Average Downwind, s/cm^3	Highest Value, s/cm^3	
DRY DEMOLITION				
Fort Bliss	Not Applicable	**0.014**	**0.041**	Several 2-story barracks with VAT, indirect prep
NESHAP IMMINENT DANGER/ WET METHOD				
Santa Cruz	Imminent Danger	**0.005**	**0.034**	ACM Unknown
Watsonville	Imminent Danger	**0.051**	**0.096**	ACM Unknown
Landscape Building	Imminent Danger	**0.001**	**0.006**	Transite Siding
Fairbanks Bldg A	Imminent Danger	**0.012**	**0.04**	Four-story Popcorn, joint compound, wrecking ball
Fairbanks City Block	Imminent Danger	**<0.0016**	**0.0017**	Joint compound, flooring, and roofing
Katrina	Imminent Danger	**0.018**	**0.041**	Mostly Transite Siding/Roofing
Fort Worth XL	WET	**<0.005**	**0.005**	Single House
St Louis Airport	WET	**0.004**	**0.0163**	Four Houses
FULL NESHAP				
Aurora Elementary	YES	**0.002**	**0.028**	School
Fort Wainwright School	YES	**0.002**	**0.017**	School
AACM1 NESHAP	YES	**<0.0005**	**0.0005**	Wall Systems, VAT
Sanders Hall	YES	**>0.095**	**>0.11**	27-story Dorm, Implosion
ALTERNATIVE ASBESTOS CONTROL METHOD (AACM)				
Fort Chaffee AACM1	AACM	**<0.0005**	**0.0010**	Wall Systems, VAT
Fort Chaffee AACM2	AACM	**<0.0005**	**0.0051**	Transite Siding
Fort Worth AACM3	AACM	**<0.0005**	**0.0030**	Popcorn ceiling, wall texture